Classic E.O.S.

Reference manual

AGFA

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Chapter 1

Introducing the Classic E.O.S.

This chapter introduces the Classic E.O.S. to the user and draws the attention to some important safety precautions.

- Welcome to the Classic E.O.S.
- Safety precautions
- Safety compliance

Welcome to the Classic E.O.S.

The Classic E.O.S. is a processor for medical X-ray films developed by Agfa. The Classic E.O.S. cannot process rollfilms.

The Classic E.O.S. offers the following features:

- Three fast processing cycles for optimal processing quality in accordance with the film type that is used: High Throughput (HT), Intermediate Processing (IP) and Rapid Processing (RP).

- Operation of the processor can be completely customized by means of the following processing parameters:
  - developer temperature,
  - dryer stage,
  - developer replenishment rate,
  - fixer replenishment rate,
  - jog-cycle function (standby developer and fixer replenishment),
  - initial developer and fixer replenishment function.

- The Classic E.O.S. ('Ecological Optimized System') features a twin fixer tank system which reduces substantially the silver carry-over to the rinse water tank.
  - After development, the exposed film enters the first fixer tank, where most of the silver is removed from the film.
  - The film then is transported through the second fixer tank, to be treated again with fresh fixer.
  - As a consequence, when the film is passed to the rinse water tank, silver freight carry-over will be very low.

❖ *Agfa can guarantee optimal film quality and compliance with statutory regulations only if Agfa materials are used.*

Safety precautions

General safety instructions

- The Classic E.O.S. was designed for processing medical X-ray films, and should only be used for this purpose.
- The processor may only be operated by qualified staff, skilled on the machine.
- Make sure that only by Agfa authorized personnel has access to the processor.
- Only trained and authorized service personnel can make repairs or changes to the processor.
- If there is visible damage to the machine casing, the processor should not be started or used.
- Do not override or disconnect the integrated safety features.
- Disconnect the processor from the mains before performing any maintenance activities.
- Like all technical devices, the processor must be operated, cared for and serviced correctly, as described in the documentation provided with the machine.
- If the processor is not operated correctly or if you do not have it serviced correctly, Agfa is not liable for resulting disturbances, damages or injuries.
- When installing the processor, care must be taken to ensure that there is either a mains plug or an all-cable disconnecting device in the internal installation fitted near the processor and that it is easily accessible.
- If connections with other components or assemblies are made, Agfa can guarantee safety only for combinations which are approved by Agfa.
- If you notice conspicuous smoke or noise, disconnect the processor immediately.

Special instructions for the handling of chemicals

- When handling chemicals, you must observe safety and environmental regulations as well as the operating and warning instructions accompanying the chemicals.
- Wear stipulated protective clothing and safety goggles.
- When disposing of chemicals and waste water, you must comply with the local regulations concerning waste water and environmental protection.
- If chemicals get into your eyes, immediately rinse your eyes with cold water and consult a physician.
- Do not inhale vapor from chemicals. Make sure that there is sufficient ventilation where the processor is installed, i.e. air exchange that is at least ten times the space volume per hour.
- Always comply with the installation instructions.
- Regularly check all connections to the processor for tightness.
- If liquid gets into the inside of the processor (due to spills), disconnect the processor from the mains immediately and have the device cleaned thoroughly by service personnel.

Safety compliance

- This processor complies with the safety regulations EN 60950: 1997 (IEC 950) and EN 60601-1-2: 1993, UL 1950 and CSA C22.2 No. 950 and with the regulations on radio interference suppression EN 50081-1, EN 55011 and FCC 47 Part 15, Subchapter B, Class A.
- The non-return water connection system complies with DIN 1988.

Chapter 2

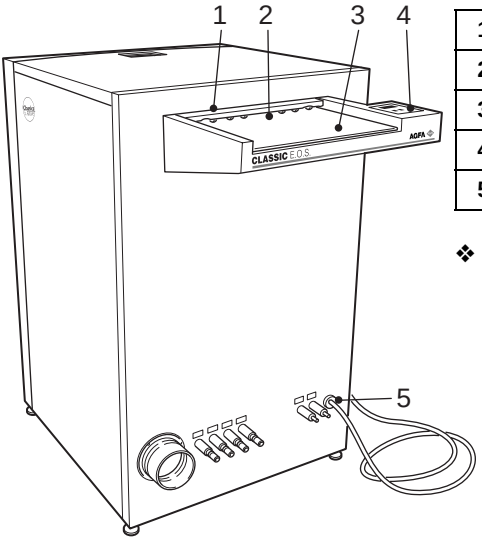
Getting started with the Classic E.O.S.

This chapter introduces the Classic E.O.S. to the user and explains some key concepts.

- Main components
- The control panel
- Switching the Classic E.O.S. on
- Switching the Classic E.O.S. off

Main components

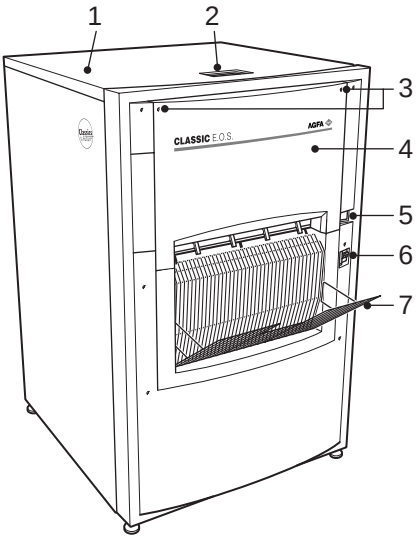
View from film entry side



1	Film scanner
2	Feed slot
3	Feed table
4	Control panel
5	Power supply

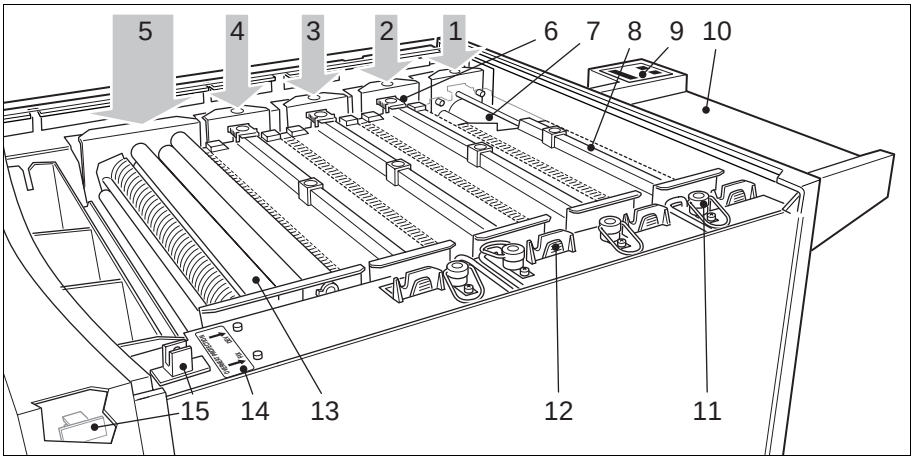
❖ *As an option, the Classic E.O.S. can be installed with all drain and replenishment tubes at the bottom of the processor.*

View from film return side



6	Top cover
7	Top cover lift-up handle
8	Cover quarter turn fasteners (2)
9	Cover
10	On/Off switch
11	Ground fault switch
12	Exit tray

View from above (upper cover removed)



1	Developer section
2	Fixer section #1
3	Fixer section #2
4	Rinsing water section
5	Dryer section
6	Tank cover release clips (8)
7	Tank transport roller set (4)
8	Tank cover with film guide elements (4)
9	Control panel
10	Feed table
11	Drain valve (4)
12	Pump housing (4)
13	Squeegee roller set
14	Fixer and developer overheat protection button (2)
15	Interlock switch (2)

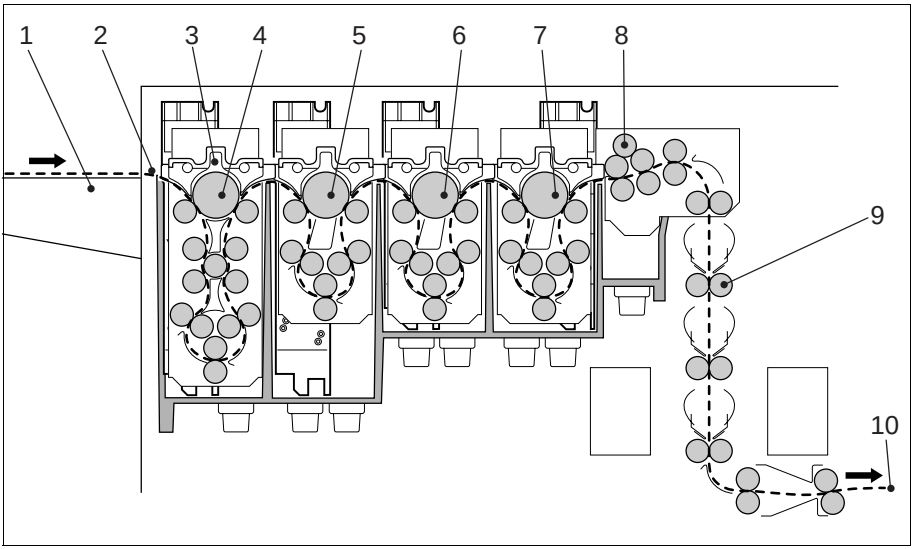
Functional diagram (cross section)

The Classic E.O.S. automatically accepts the film as you introduce it in the feed slot on the feed table.

A built-in film scanner measures the surface of the entered film, which enables the processor to provide the appropriate amount of replenishment.

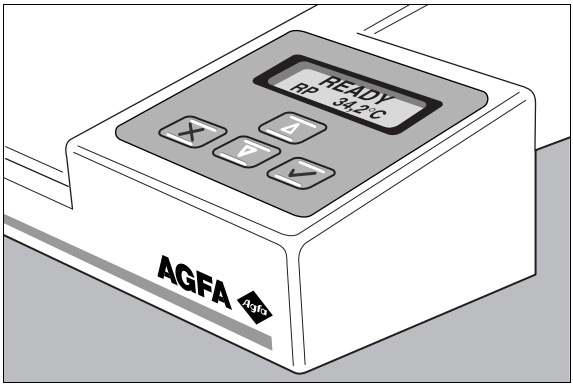
The Classic E.O.S. then develops, fixes, rinses and dries the film.

Finally, it deposits the processed film in the exit tray.



1	Feed table
2	Film scanner
3	Tank cover with film guide elements (4)
4	Developer transport roller set
5	Fixer transport roller set #1
6	Fixer transport roller set #2
7	Rinsing water transport roller set
8	Squeegee roller set
9	Dryer transport roller set (7)
10	Exit tray

The control panel

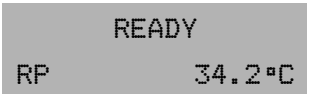


Control panel keys

Key	Key description	Action
	Up key.	• To scroll upward through multiple choices in a field.
	Down key.	• To scroll downward through multiple choices in a field.
	Escape key.	• To quit a submenu without saving any changes.
	Confirm key.	• To select a menu item.

Control panel display

The LCD display of the control panel consists of two lines of 16 digits, located above the keys on the control panel.



or, e.g.:

The display keeps the user informed on the status of the processor, e.g. when failures occur by showing an appropriate message.

Refer to chapter 6, 'Troubleshooting'.

User language

The language in which the messages on the display appear can be selected in accordance with your personal choice. The following are available:

Language			Language	
Danish	Dansk		Greek	Ελληνικά
Dutch	Nederlands		Italian	Italiano
English	English		Norwegian	Norsk
Finnish	Suomi		Portuguese	Português
French	Français		Spanish	Español
German	Deutsch		Swedish	Svenska

Refer to your local service organization.

Audio signals

The Classic E.O.S. also informs you about its status by means of beeps. The length of the beep indicates the system's response to a key command.

- A **short** beep means that Classic E.O.S. accepts the command and begins the operation.
- A **long** beep signifies that the Classic E.O.S. rejected the command or the action or process failed.
- An **interval** beep accompanies an error status message. *Refer to 'Troubleshooting checklist' on page 74.*

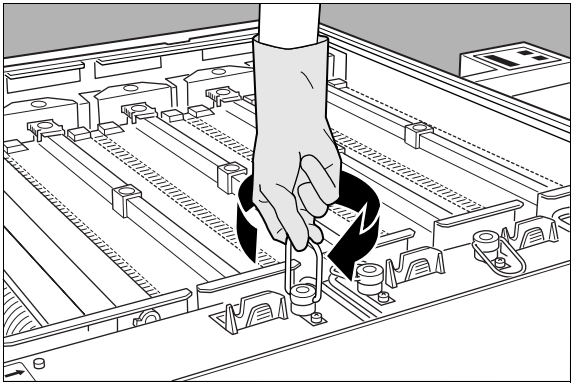
Switching the Classic E.O.S. on

Before switching on

❖ *When operating the processor for the first time, make sure that the processor has been installed in accordance with the Agfa installation instructions.*

1 Make sure the machine is connected to the power supply.

2 Make sure all drain valves are closed by turning clockwise.



3 Make sure the water tap is opened.

4 Make sure the chemical tanks are filled.

5 Make sure all covers are properly installed and that the interlock switches are engaged.

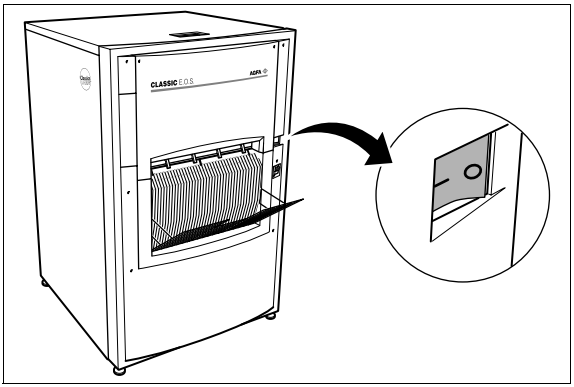
6 Make sure the feed table and exit tray are clean.

7 Make sure the ground fault switch is not switched off.

Switching the Classic E.O.S. on

1 Locate the main switch and place it in position ‘I’.

Do not touch the switches with wet fingers!



The processor starts an initialization procedure that may take 15 to 20 minutes.

During the initialization phase an emergency film can be processed if a film is introduced on the feed table. ***Refer to ‘Processing an emergency film’ on page 25.***

2 The developer and fixer are heated or cooled.

```
Heating
developer
```

or, e.g.:

```
RP          34.2°C
```

You can watch the progress of heating or cooling as the temperature indication changes accordingly.

3 After a while, the following message indicates that the processor is ready for operation:

```
      READY
RP          34.2°C
```

❖ *The actual temperature to be reached depends upon the setting for the actual processing cycle.* *Refer to ‘Developer temperature’ on page 36.*

After switching on

1 Introduce large sheets of blank films (cleaning films), e.g. film size 35x43 cm/ 14x17 inch, when the processor has been on standby for an extended period of time, e.g. overnight, to remove any deposits or residue from the transport path of the film.

2 It might be necessary to initiate an additional developer replenishment, depending on the start-up developer replenishment setting, which can be set ON or OFF.

If set ON, an automatic replenishment is initiated automatically when switching the processor on. *Refer to 'Setting the start-up replenishment function' on page 47.*

Switching the Classic E.O.S. off

Before switching off

Verify that no film is being processed before switching off the processor.

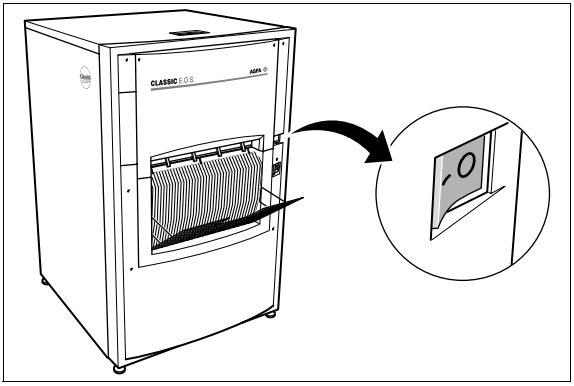
Switching off

It is recommended to switch the processor off:

- when you do not intend to process films for the next couple of hours,
- at the end of the day.

1 Place the main switch in position ‘0’.

Do not touch the switch with wet fingers!



2 The water tank is drained automatically.

If the processor is used continually, the water tank will be drained automatically once per period of twenty-four hours. The default time setting is 02:00 h; the time can be changed by your local service organization. This draining operation takes approx. 8 minutes.

Chapter 3

Processing films

This chapter holds basic information on how to process films both under normal conditions and in emergency situations.

- Processing films
- Processing an emergency film
- Recommended chemicals

Processing films

Processing a film is very easy and straightforward: you just have to place the exposed film on the feed table and feed it into the feed slot of the Classic E.O.S. The Classic E.O.S. will then process the film and deposit it in the exit tray.

The Classic E.O.S. can process all common brands of medical X-ray film suitable for machine processing. You can apply sheet films of the following sizes:

- maximum width: 43,2 cm (17 inch),
- smallest size: 10 x 10 cm.

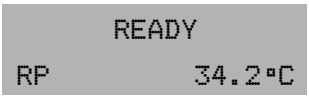
DO NOT process rollfilm on the Classic E.O.S.

Processing under normal conditions

Proceed as follows:

1 Check whether the processor is switched on and ready for operation.

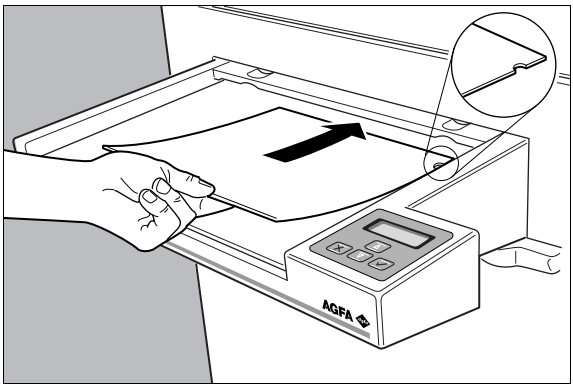
The display should show, for example, the READY message:



Introduce large sheets of blank films (cleaning films), e.g. film size 35 x 43 cm, when the processor has been on standby for an extended period of time, e.g. overnight, to remove any deposits or residue from the transport path of the film.

2 Place the sheet of film to be processed on the feed table.

Make sure that the film edge is aligned with the feed slot.



The processor accepts the film and starts processing it.

The following message is shown:

```
   Please wait
```

3 Wait until you hear a short beep, and the READY status message reappears.

```
      READY
RP          34.2°C
```

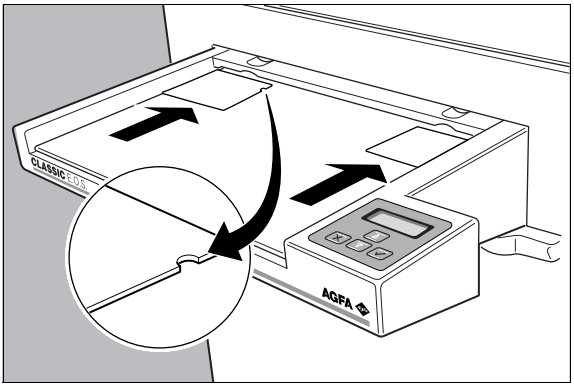
You can now introduce the next film to be processed.

Processing narrow films

You can place narrow films side by side on the feed table to have them processed simultaneously.

However, make sure these films do not overlap.

You can introduce 2 sheets of 10 x 10 cm film simultaneously as shown below.



DO NOT process roll film on the Classic E.O.S.

Processing an emergency film

It may happen that you have one or more films to process at a time when the Classic E.O.S. is not completely ready for operation. This can be e.g.:

- when the Classic E.O.S. is initializing and the developer has not yet reached the set temperature,
- when an error status message is displayed.

Still, the Classic E.O.S. enables you to process films in these conditions. Films thus processed are referred to as 'emergency films'.

Emergency films do not always meet the quality standards of development, rinsing or fixing. In addition, the archivibility of films thus processed is not always guaranteed. Under particular circumstances, the film might be useless to make a proper diagnosis!

Proceed as follows to process emergency films:

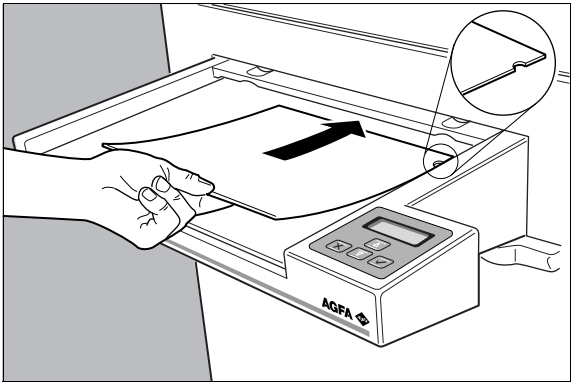
1 Check the display.

❖ *Caution: Emergency film processing is not possible if, e.g., the following message appears:*

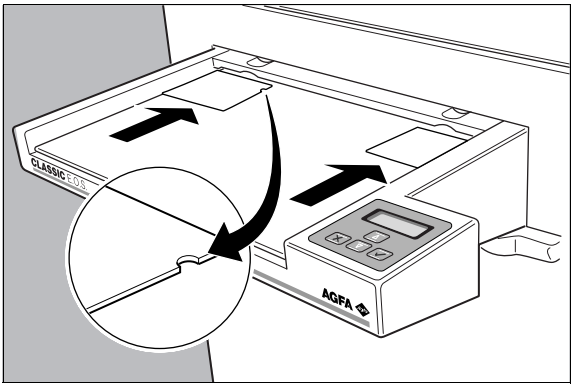
Refer to 'Emergency film processing' on page 75.

2 Place the emergency film to be processed on the feed table.

Make sure that the film edge is aligned with the feed slot.



You can place narrow films side by side on the feed table to have them processed simultaneously. However, make sure these films do not overlap.



The processor accepts the film automatically and displays the following message on the control panel:

```
Emergency film
Please wait
```

3 Wait until you hear a short beep.

You can now introduce the next emergency film to be processed.

Recommended chemicals

The tables below list the recommended chemicals, as a function of the processing cycle, temperature level and the replenishment quantity.

Chemicals	Developer and fixer temperature		
	HT	IP	RP
Developer G 138 i	38 ° C	37 ° C	34 ° C
Fixer G 334 i/ G 338	34 ° C	34 ° C	34 ° C

Chemicals	Replenishment quantity
	HT / IP / RP
Developer G 138 i	400 ml/m^2
Fixer G 334 i/ G 338	400 ml/m^2

The replenishment quantities as listed in the above table are valid only if your film consumption exceeds 5 m^2 film/day and is based on a regular daily use. If your daily film consumption is lower, you can initiate a chemical jog cycle, which provides additional replenishment rates that compensate for low film usage.

When handling chemicals, make sure to take notice of the warning instructions on the packing material. ***Refer to 'Special instructions for the handling of chemicals' on page 8.***

Refer to chapter 4, 'Customization'.

Chapter 4

Customization

This chapter holds the step-by-step procedures which explain how to set the processing parameters to customize the Classic E.O.S.

- ❑ Customizing the processing parameters
- ❑ Processing cycle
- ❑ Developer temperature
- ❑ Dryer setting
- ❑ Developer replenishment rate
- ❑ Fixer replenishment rate
- ❑ Standby developer and fixer replenishment (jog cycle)
- ❑ Setting the start-up replenishment function
- ❑ Language
- ❑ Autofill

Customizing the processing parameters

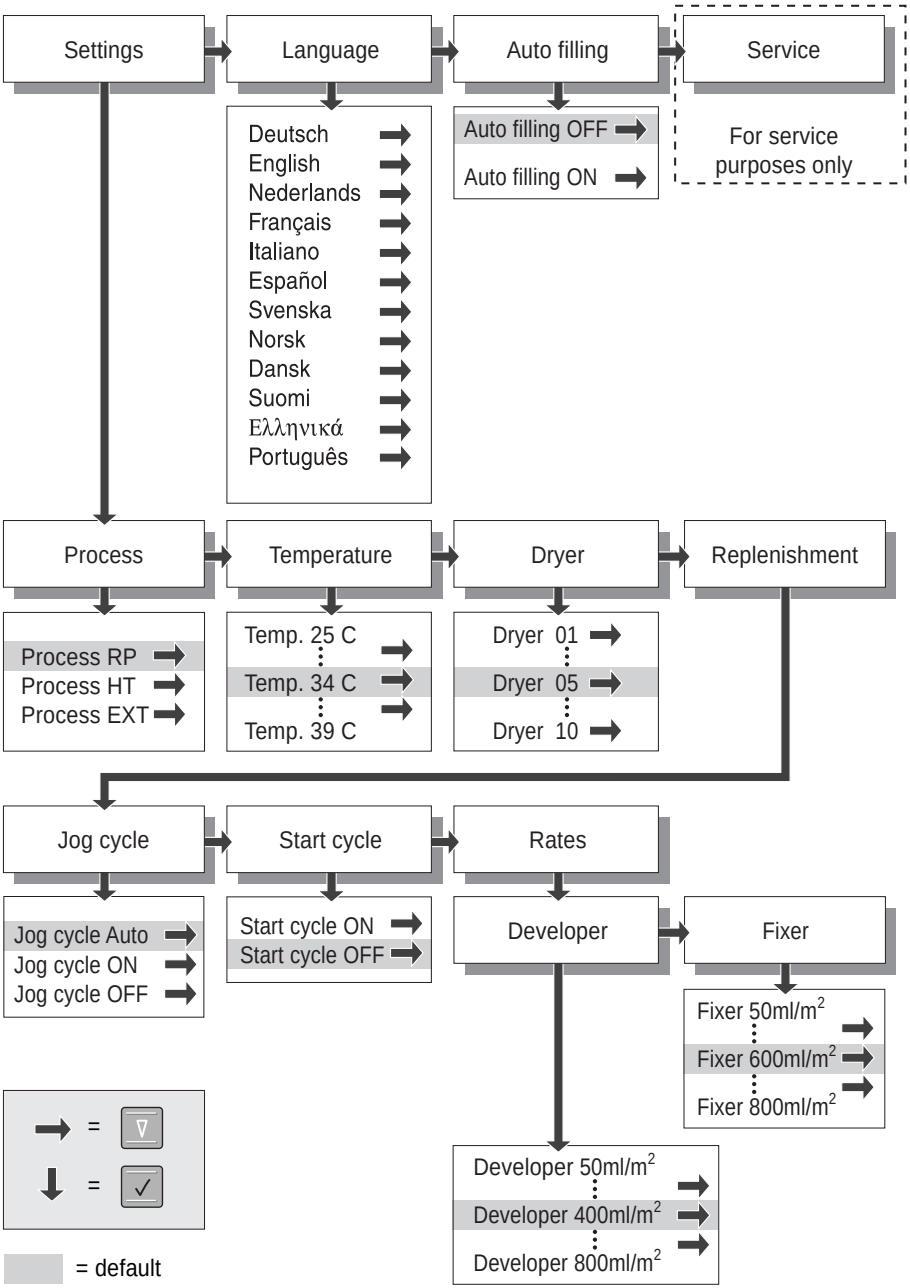
Overview

The following processing parameters can be set to optimize the sensitometric stability of the system.

It may be possible that all parameters settings are password protected, except for the dryer setting. Refer to qualified service personnel if settings need to be changed and a password must be entered.

Processing parameter	Default setting	Refer to
Processing cycle.	RP	*34*
Developer temperature.	34 °C	*36*
Dryer setting. (Default stage 05 for RP and IP; 07 for HT)	Stage 05	*38*
Developer replenishment rate.	400 ml/m^2	*40*
Fixer replenishment rate.	400 ml/m^2	*43*
Standby developer and fixer replenishment (jog cycle).	AUTO	*45*
Setting the start-up replenishment function.	Deactivated	*47*
Language.	Country specific	*49*
Autofill.	OFF	*50*

Menu structure diagram



General guidelines

Always keep in mind the following general guidelines when changing the processing parameter settings.

- The procedures in this chapter describe how to set the processing parameters one by one. It is possible however to make all required adjustments in succession, without having to return each time to the READY status display:

- During the customization session, if you do not press any key on the control panel within 45 seconds, the READY status display reappears and any changes you made in the settings are discarded.

Two different screens can be discerned:

- Menu screens (shadowed rectangles in the menu structure diagram)

In the menu screens, use the Up and Down keys to toggle between both items on the menu, and to scroll to a following (Down key on last line) or a previous menu (Up key on first line) on the same level. The currently active menu item is ***blinking***. If you press the Confirm key on a blinking item, you select that menu item.

- Data screens

In the data screens, use the Up and Down keys to increase or to decrease the value of the setting. If you press the Confirm key on a value, you select that value for the concerned menu item.

When to adjust the processing parameters

You may want to adjust the processing parameters

- when environmental conditions change, e.g. relative humidity or room temperature,
- when other chemicals will be used,
- when another type of film will be used.

Changing some of the parameters can have a negative effect on the image quality. Always consult your local service organization.

Overview of recommended settings

The table below lists the recommendations for optimal processing stability, depending on your specific workload.

Developer replenishment rate					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
400 ml/m²	400 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²
Standby developer and fixer replenishment - jog cycle (*)					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	OFF	OFF	OFF	ON	ON
Start-up replenishment function					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	ON	OFF	ON	OFF	ON

(*) The default setting is AUTO: the developer and fixer jog cycle is set automatically ON if the daily film consumption is less than 3 m². It is set automatically OFF if the daily film consumption is more than 3 m².

Processing cycle

The Classic E.O.S. features three processing cycles: HT processing, IP processing and RP processing (default setting).

Select the processing cycle in accordance with:

- the film type (or mix of film types) you wish to process,
- the amount of contrast that is required,
- the throughput that is wanted.

Keep in mind that each processing cycle corresponds to a specific developer temperature and dryer setting.

The processing cycle is not adjustable during film processing.

Setting the processing cycle

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Confirm key to select ‘Settings’.

3 Press the Confirm key to select ‘Process’.

4 Press the Up and Down keys to select the required process (HT, IP or RP).

5 Press the Confirm key to activate the selected processing cycle.

6 Press the Escape key twice to quit the menu.

Developer temperature

You can adjust the developer temperature in the range of 25 to 39 °C. The default setting is 34 °C (RP).

When adjusting the developer temperature, take into account:

- the current processing cycle,
- the type of developer used, and
- the film type.

The following table lists the recommended temperature settings, depending on the developer that is used and the selected processing cycle:

Developer	**Temperature setting per processing cycle**		
	HT	IP	RP
G 138 i	38 °C	37 °C	34 °C

❖ *Remark: If you select a lower developer temperature than the current one, it takes some time for the developer to cool, approximately 5 minutes per degree Centigrade. It may be more convenient to add new cooler developer or you can accelerate the cooling process by having a developer heat exchanger connected. This developer heat exchanger is optionally available and is required:*

– *if the processing temperatures are to be changed quickly,*

– *if the difference between the set developer temperature and the ambient temperature is lower than 4 °C, e.g. if the set developer temperature is 30 °C and the room temperature is 26 °C or higher.*

⚠ ***Keep in mind that each processing cycle corresponds to a specific developer temperature and dryer setting.***

The developer temperature is not adjustable during film processing.

Setting the developer temperature

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Confirm key to select ‘Settings’.

3 Press the Down key followed by the Confirm key to select ‘Temperature’.

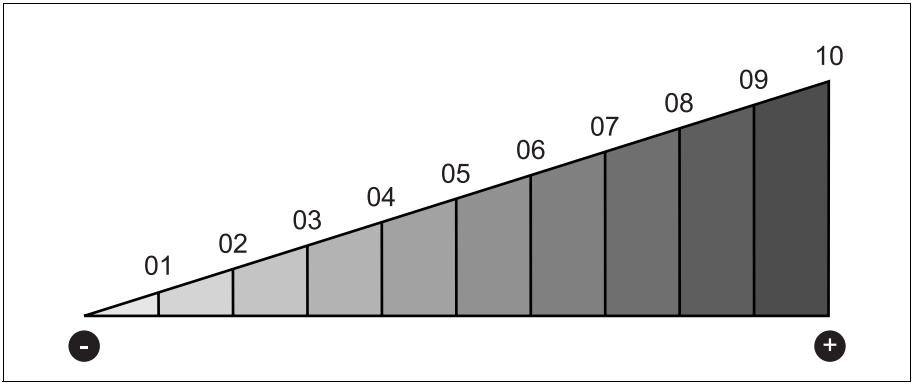
4 Press the Up and Down keys to select the required temperature (from 25 to 39 °C).

5 Press the Confirm key to activate the selected temperature.

6 Press the Escape key twice to quit the menu.

Dryer setting

The dryer of the Classic E.O.S. has 10 drying stages, in an incremental range from 01 to 10.



The default dryer setting is 05 (RP and IP). For HT, default setting is 07.

However, you can select another drying stage, depending on the film type and the selected processing cycle. To obtain the best possible drying quality, adjust the dryer setting as follows:

If the film is still moist when processed, increase the dryer setting.

If the processed film is deformed or shows drying patterns, decrease the dryer setting.

The dryer setting can be adjusted during film processing.

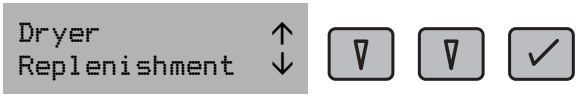
Setting the dryer setting

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Confirm key to select ‘Settings’.

3 Press the Down key two times followed by the Confirm key to select ‘Dryer’.



4 Press the Up and Down keys to select the required dryer setting (from 01 to 10).

5 Press the Confirm key to activate the selected dryer setting.

6 Press the Escape key twice to quit the menu.

Developer replenishment rate

The developer replenishment rate must be set in accordance with the amount of film that is processed. The Classic E.O.S. allows for surface scanning of film, taking into account not only the film length but also the film width.

The default setting is 400 ml/m².

Refer to the table for recommended developer replenishment rates, depending on your specific workload.

Developer replenishment rate					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
400 ml/m²	400 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²
Related setting: Standby developer and fixer replenishment - jog cycle					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	OFF	OFF	OFF	ON	ON
Related setting: Start-up replenishment function					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	ON	OFF	ON	OFF	ON

The developer replenishment rate is not adjustable during film processing.

If you do not comply with the recommended replenishment rates, the optimal processing stability is no longer guaranteed and sensitometric variations might occur.

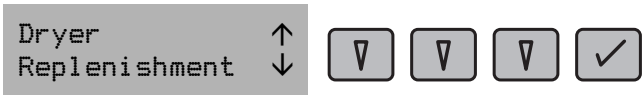
Setting the developer replenishment rate

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Confirm key to select ‘Settings’.

3 Press the Down key three times followed by the Confirm key to select ‘Replenishment’.



4 Press the Down key two times followed by the Confirm key to select ‘Rates’.

5 Press the Confirm key to select ‘Developer’.

6 Press the Up and Down keys to select the required developer replenishment value (from 50 to 800 ml/m², in steps of 50 ml/m²).

7 Press the Confirm key to activate the selected developer replenishment rate.

8 Press the Escape key four times to quit the menu.

Fixer replenishment rate

The default setting is 400 ml/m².

You can try to increase the rate if fog-level, speed and contrast of the film is affected. Keep in mind that changing the fixer replenishment rates can result in bad archival quality.

The fixer replenishment rate is not adjustable during film processing.

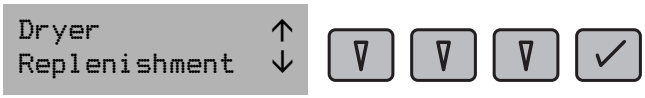
Setting the fixer replenishment rate

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Confirm key to select ‘Settings’.

3 Press the Down key three times followed by the Confirm key to select ‘Replenishment’.



4 Press the Down key two times followed by the Confirm key to select ‘Rates’.

5 Press the Down key followed by the Confirm key to select ‘Fixer’.

6 Press the Up and Down keys to select the required fixer replenishment value (from 50 to 800 ml/m², in steps of 50 ml/m²).

7 Press the Confirm key to activate the selected fixer replenishment rate.

8 Press the Escape key four times to quit the menu.

Standby developer and fixer replenishment (jog cycle)

In order to compensate for oxidation of chemicals during a protracted standby period, an additional replenishment of developer and fixer can be initiated automatically every hour ('jog cycle' function).

The default setting is AUTO: the jog cycle will be automatically switched ON or OFF in accordance with your daily film consumption: ON if the consumption is less than 3 m² per day, OFF if the consumption is more than 3 m² per day.

Refer to the table for recommended jog cycle settings, depending on the specific workload.

Related setting: Developer replenishment rate					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
400 ml/m²	400 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²
Standby developer and fixer replenishment - jog cycle					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	OFF	OFF	OFF	ON	ON
Related setting: Start-up replenishment function					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	ON	OFF	ON	OFF	ON

The jog cycle is not adjustable during film processing.

If you do not comply with the recommended replenishment rates, the optimal processing stability is no longer guaranteed and sensitometric variations might occur.

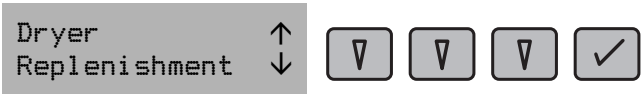
Setting the jog cycle (standby developer and fixer replenishment)

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Confirm key to select ‘Settings’.

3 Press the Down key three times followed by the Confirm key to select ‘Replenishment’.



4 Press the Confirm key to select ‘Jog cycle’.

5 Press the Up and Down keys to select the required jog cycle setting (Auto, ON, OFF).

6 Press the Confirm key to activate the selected setting.

7 Press the Escape key three times to quit the menu.

Setting the start-up replenishment function

This function assures an automatic developer and fixer replenishment every time the processor is switched on. This setting should be activated if the processor is used on an irregular basis (only a few days per week).

The default setting is OFF.

Refer to the table for recommended start-up developer and fixer replenishment settings, depending on the specific workload.

Related setting: Developer replenishment rate					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
400 ml/m²	400 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²	600 ml/m²
Related setting: Standby developer and fixer replenishment - jog cycle					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	OFF	OFF	OFF	ON	ON
Start-up replenishment function					
more than 5 m² film/day		3 to 5 m² film/day		less than 3 m² film/day	
daily use	irregular use	daily use	irregular use	daily use	irregular use
OFF	ON	OFF	ON	OFF	ON

The start-up replenishment rate is not adjustable during film processing.

If you do not comply with the recommended replenishment rates, the optimal processing stability is no longer guaranteed and sensitometric variations might occur.

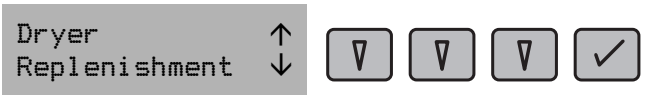
Setting the start-up replenishment function

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Confirm key to select ‘Settings’.

3 Press the Down key three times followed by the Confirm key to select ‘Replenishment’.



4 Press the Down key followed by the Confirm key to select ‘Start cycle’.

5 Press the Up and Down keys to select the required start up replenishment setting (ON or OFF).

6 Press the Confirm key to activate the selected setting.

7 Press the Escape key three times to quit the menu.

Language

You can select the language in which the messages on the display appear.

The following are available:

Language			Language	
Danish	Dansk		Greek	Ελληνικά
Dutch	Nederlands		Italian	Italiano
English	English		Norwegian	Norsk
Finnish	Suomi		Portuguese	Português
French	Français		Spanish	Español
German	Deutsch		Swedish	Svenska

❖ *The language can be adjusted during film processing.*

Setting the language

1 Press any key to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Down key followed by the Confirm key to select ‘Language’.

3 Press the Up and Down keys to select the required language.

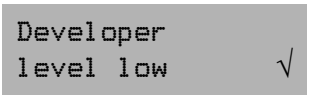
4 Press the Confirm key to activate the selected language.

Autofill

❖ *The Autofill function is only applicable when using the 5270/105 processor in combination with the LR 3300 S Laser Imager.*

The Autofill function allows for the automatic filling of developer and fixer tanks, when the level of the developer or fixer in the processor tank is too low.

The following message indicates that the level of the developer in the processor tank is too low:



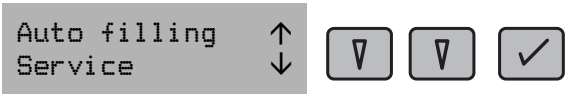
or, for the fixer,

Setting the automatic filling setting ON or OFF:

1 Press any key for more than 3 seconds to start.

❖ *You can press the Escape key at any time to quit a menu without making changes.*

2 Press the Down key twice followed by the Confirm key to select ‘Auto filling’.



3 Press the Up and Down keys to select the required Auto filling setting (ON or OFF).

4 Press the Confirm key to activate the selected setting.

❖ *If the ‘Auto filling’ function is activated, the tanks (Developer, Fixer 1 & 2) will be filled automatically. Afterwards, the temperature of the tanks will be adjusted to the set developer or fixer temperature.* *Refer to ‘Developer temperature’ on page 36.*

Chapter 5

Preventive maintenance

This chapter guides the user through maintenance and cleaning tasks.

- ❑ Survey of the preventive maintenance work
- ❑ General cleaning directions
- ❑ Clean the feed table and film scanner
- ❑ Clean the tank covers and film guide elements
- ❑ Clean the tanks and roller sets
- ❑ Clean the squeegee roller set
- ❑ Clean the pumps
- ❑ Cleaning the water filter

Survey of the preventive maintenance work

Preventive maintenance and cleaning of the Classic E.O.S. at regular intervals will keep the Classic E.O.S. running smoothly and ensure optimum processing quality.

A survey of this cleaning and maintenance work is listed in the table below. The procedures themselves are explained in detail in this chapter.

Interval	Maintenance work	Page
Daily	Clean the feed table.	*54*
	If possible, switch the Classic E.O.S. off overnight.	*20*
Weekly	Clean the tank covers and film guide elements.	*56*
Monthly	Check the ground fault switch.	
Every three months	Clean the tanks and roller sets.	*59*
	Clean the squeegee roller set.	*66*
	Clean the pumps.	*68*
	Clean the dryer roller sets. Procedure for skilled service personnel only.	*97*
Every six months	Cleaning the water filter.	*104*
Yearly	Have the rack bearings and gears checked by your local service organization.	
Ad hoc	Clean the film scanner.	*54*
	Have the replenishment settings checked by your local service organization.	
	Have the rack bearings and gears checked by your local service organization.	

If you do not comply with the above-mentioned maintenance instructions, there might be a loss of photographic quality. If the processor is not maintained correctly, the proper functioning and the safe operation of the machine are no longer guaranteed.

General cleaning directions

When cleaning the Classic E.O.S., always keep in mind the following directions:

Always disconnect the power cord from the wall outlet or switch off the main switch. Do not touch the power cord or the main switch with wet fingers! Note that the power cord has to be disconnected from the wall outlet in order to disconnect the unit entirely from the mains. It does not suffice only to switch off the main switch.

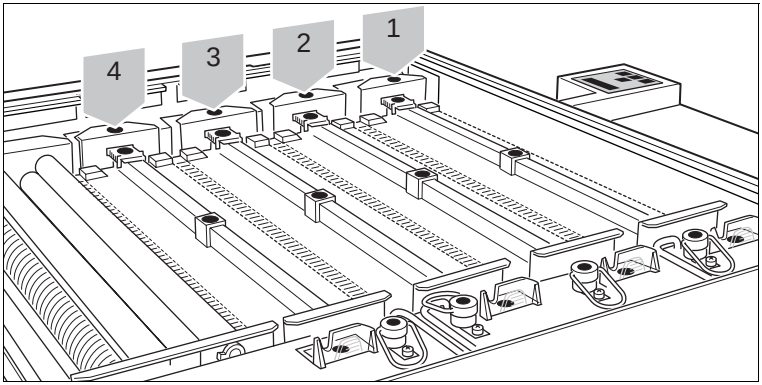
Never use hot water. The highest temperature allowed is 40 °C.

The electrical cables to the heaters are permanent and should never be disconnected.

Overview and location of identification labels.

The tank covers, pumps, tanks and roller sets are identified with numbered labels for proper replacement after cleaning, in order to prevent contamination of the chemicals. All elements that are removed for cleaning must be returned to their proper location after cleaning.

	Water	Fixer 2	Fixer 1	Developer
Tank covers (with film guide elements)	**4**	**3**	**2**	**1**
Tanks	**4**	**3**	**2**	**1**
Roller sets	**4**	**3**	**2**	**1**
Pumps	**4**	**3**	**2**	**1**
Drain valves	**4**	**3**	**2**	**1**



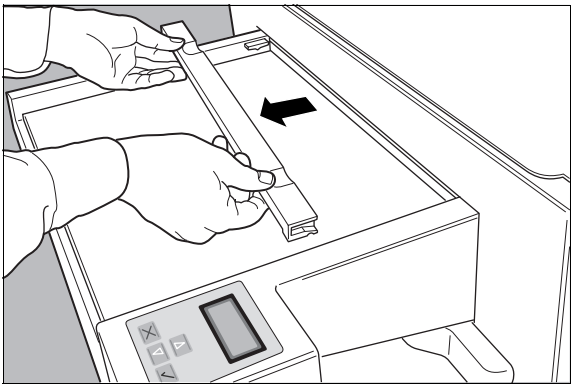
Clean the feed table and film scanner

Clean the feed table at the beginning of each working day to prevent streaks or impurities on the film.

Do not clean the film scanner every day, but you can remove it to clean the feed table completely. Clean the film scanner only when necessary. The film scanner measures the surface of the film when it is introduced. This assures convenient replenishment rates for the chemicals, depending on the film sizes.

When cleaning the film scanner make sure to handle the film scanner rollers with care. Do not damage them.

1 Remove the film scanner housing by pulling it horizontally from its latches.

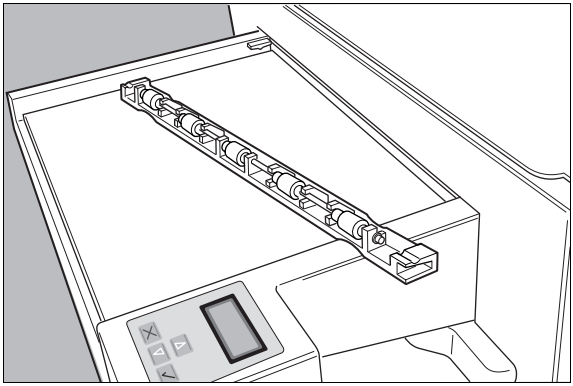


You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

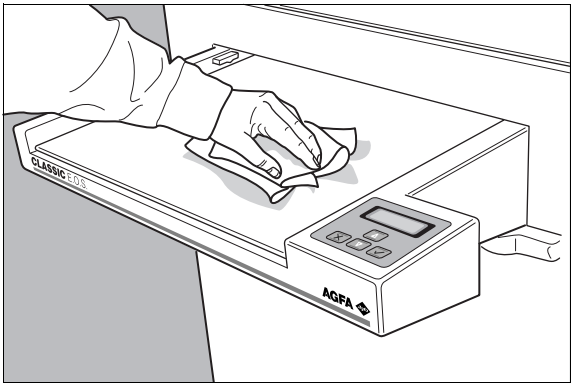
2 If necessary, clean the film scanner rollers and the scanner housing with a damp sponge or a lint-free cloth.

Clean the film scanner ONLY when necessary!

Take care: the film guide elements have sharp edges.



3 Clean the feed table using a moist lint-free cloth or sponge.



4 Wipe the feed table dry.

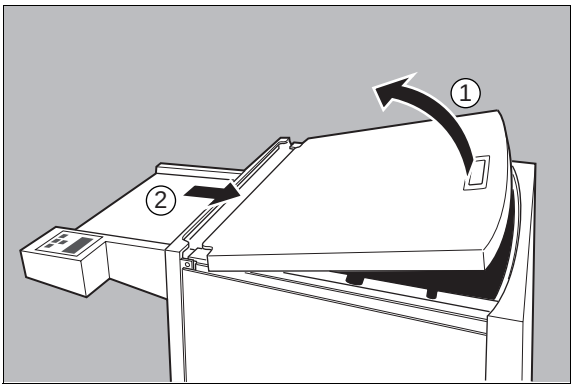
5 Replace the film scanner housing by pushing it in the direction of the machine until it latches into place.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

Clean the tank covers and film guide elements

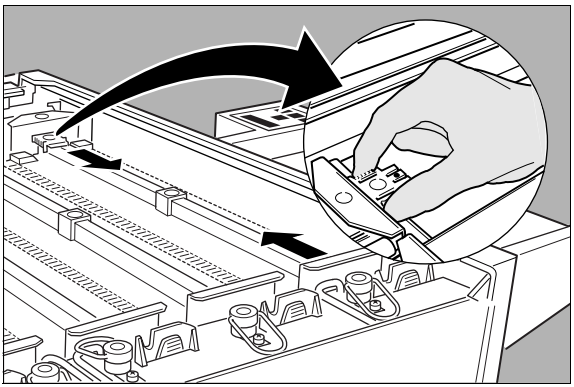
The tank covers with their film guide elements should be cleaned every week.

1 Remove the top cover.



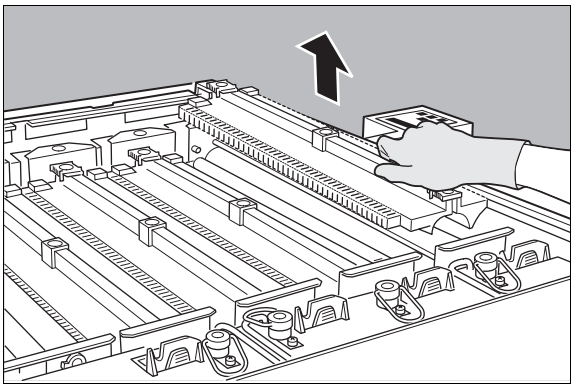
2 Unlock the covers of the developer tank, the two fixer tanks and the water tank.

Slide the two clips towards each other to release each cover, as shown below.



You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

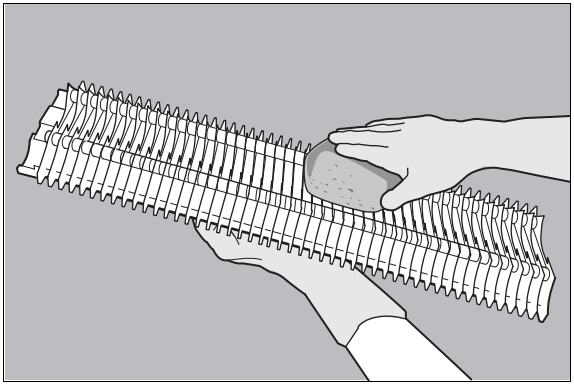
3 Remove the tank covers from the roller sets.



4 Clean the tank covers and film guide elements using a moist soft sponge.

Be extremely careful: do not damage the plastic film guide elements!

Take care: the film guide elements have sharp edges.



5 Wipe the tank covers dry.

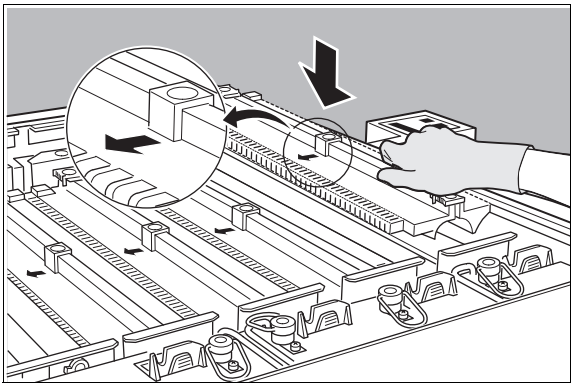
6 Check the numbers which mark the tank covers and their corresponding tanks.

Make sure to place the tank covers back on their corresponding roller sets.
Refer to 'Overview and location of identification labels.' on page 53.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

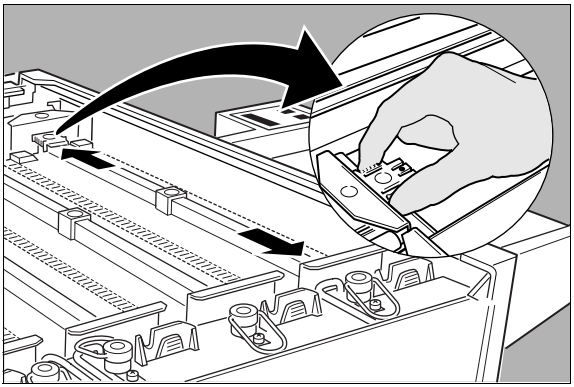
7 Place the cleaned tank covers back onto their corresponding roller sets.

Make sure the arrows on the tank covers point in the direction of the film exit tray.



8 Lock the tank covers.

Slide the two clips outwards as far as they will go (you must hear a click).



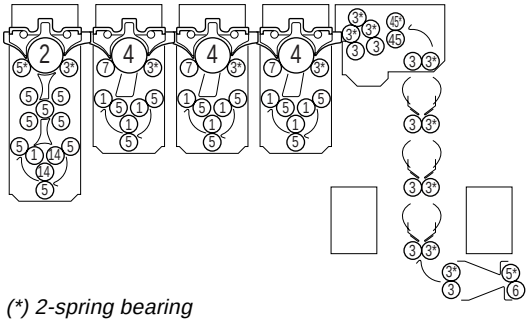
9 Reinstall the top cover.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

Clean the tanks and roller sets

Observe safety and environmental regulations when working with chemicals. It is also advisable to wear the recommended protective clothing and goggles.

Clean the developer tank, the fixer tanks and the water tank once every three months. The way in which the tanks and rollers are arranged is reproduced on an adhesive label, to be found when the top cover is removed.

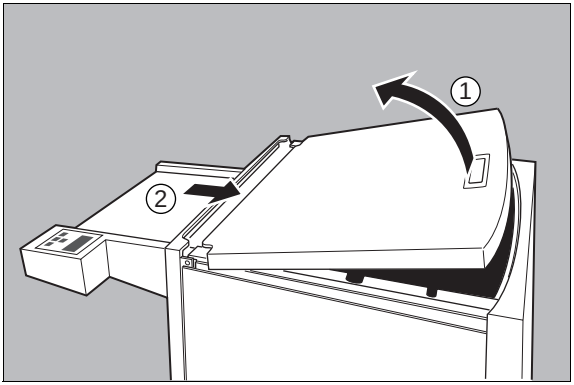


(*) 2-spring bearing

1	Gray rubber ø 22.5
2	Gray rubber ø 48
3	Gray rubber steel core ø 22.5
4	Yellow plastic ø 48
5	Yellow plastic ø 22.5
6	Red rubber ø 22.5
7	Yellow rough plastic ø 22.5
14	Gray rubber ø 22.8
45	Foam rubber ø 22.5

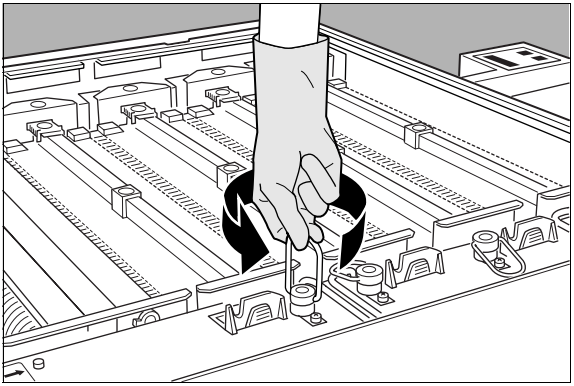
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

1 Remove the top cover.



2 Drain the developer tank, the two fixer tanks and water tank.

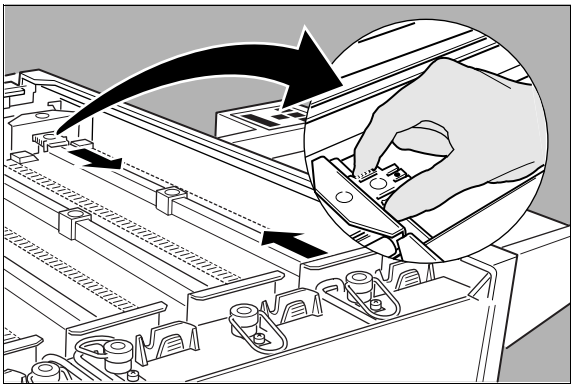
Turn the four drain valves counterclockwise.



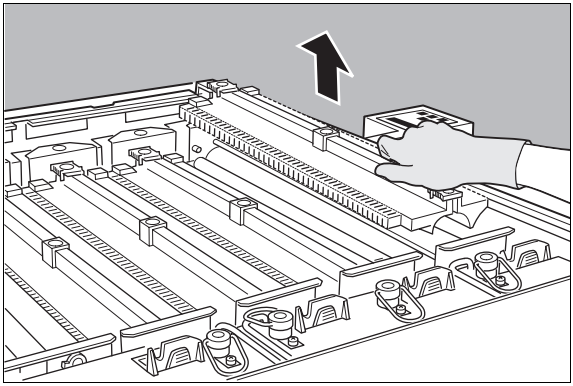
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

3 Unlock the covers of the developer tank, the two fixer tanks and the water tank.

Slide the two clips towards each other to release each cover, as shown below.

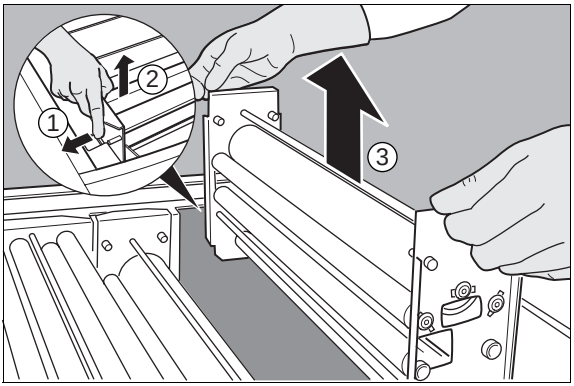


4 Remove the tank covers from the roller sets.



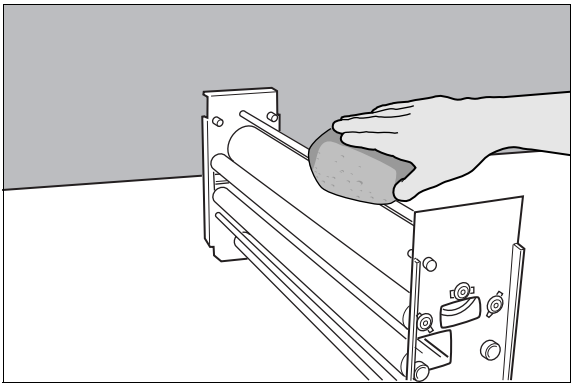
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

5 Release each roller set from its positioning clip [1] and carefully lift [2] the roller set out of its location [3].



6 Place the roller sets on a stable work surface.

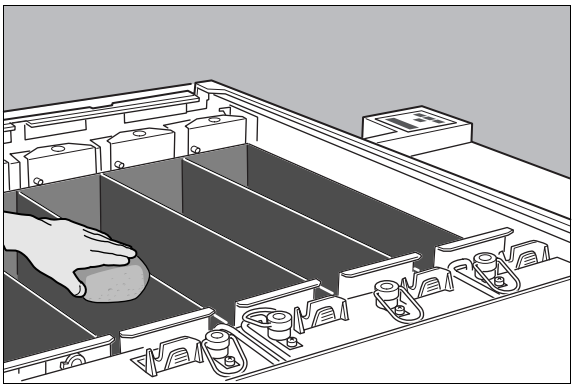
7 Clean the roller sets thoroughly under running water.



Use a soft sponge to wipe off deposits.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

8 Wipe the four tanks of the processor clean using a moist sponge.

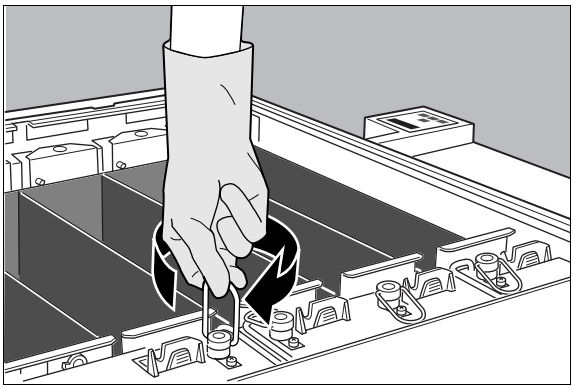


9 Rinse the tanks thoroughly with water.

Take care not to spill any liquid alongside the tanks.

10 Wipe the roller sets, the tank covers, the developer tank and the fixer tanks dry using a lint-free cloth or sponge.

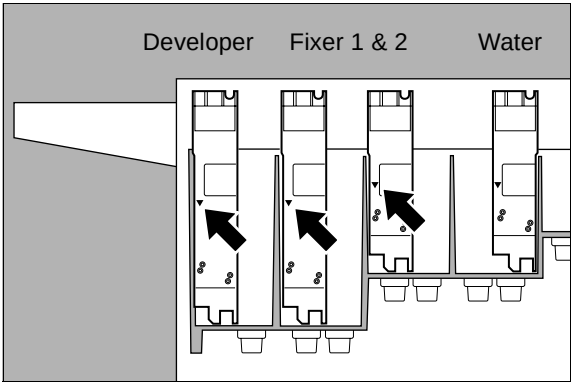
11 Close the tank drains by turning the four drain valves clockwise.



You now have to refill the tanks with new fixer or developer.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

12 Fill the tanks up to the marking with ready-mixed fixer or developer.



Take care not to spill any fixer into the developer tank. Otherwise, clean the developer tank again and rinse it thoroughly.

13 Make sure to check the numbers which mark the roller sets, the tank covers and their corresponding tanks.

Make sure to place all elements back to their appropriate location. ***Refer to 'Overview and location of identification labels.' on page 53.***

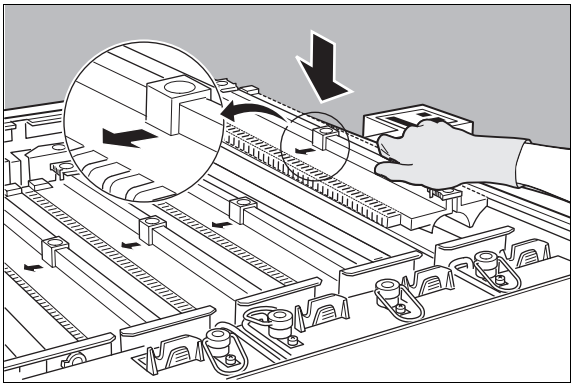
14 Place the roller sets back in the corresponding tanks (refer to the identification number labels).

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

15 Place the tank covers back onto their corresponding roller sets.

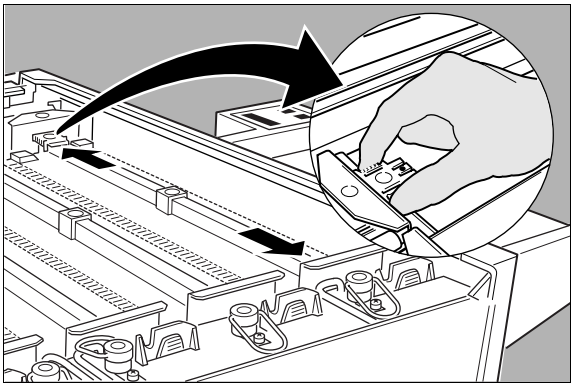
Clean the tank covers and film guide elements before placing them. *Refer to 'Clean the tank covers and film guide elements' on page 56.*

Make sure the arrows on the tank covers point in the direction of the film exit tray.



16 Lock the tank covers.

Slide the two clips outwards as far as they will go (you must hear a click).



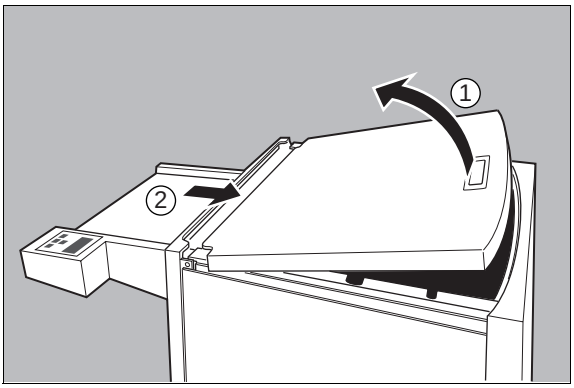
17 Reinstall the top cover.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

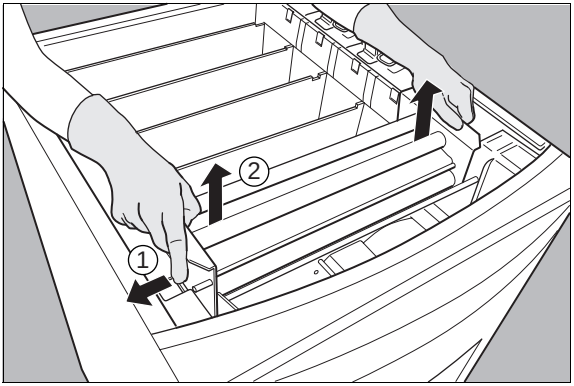
Clean the squeegee roller set

Clean the squeegee roller set every three months.

1 Remove the top cover.



2 Release the squeegee roller set from its positioning clip [1] and carefully lift the roller set out of its location [2].



3 Place the squeegee roller set on a stable, flat surface.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

4 Clean the squeegee rollers using a moist sponge.

Clean the squeegee rollers only with water, do NOT use any chemicals!

Make sure that the squeegee rollers do not come into contact with the grease of the drive shaft!

5 Wipe the rollers dry using a lint-free cloth or sponge.

6 Reinstall the squeegee roller set into its location, making sure the roller set fits into the positioning clip.

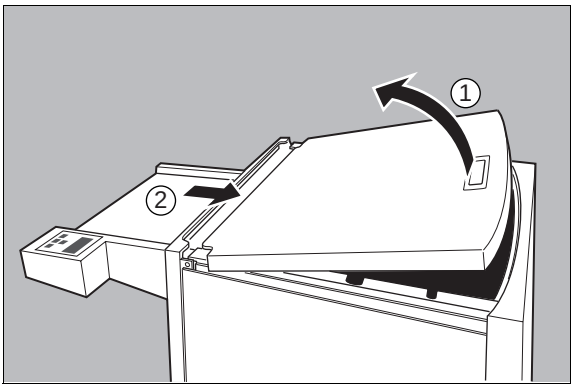
7 Reinstall the top cover.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

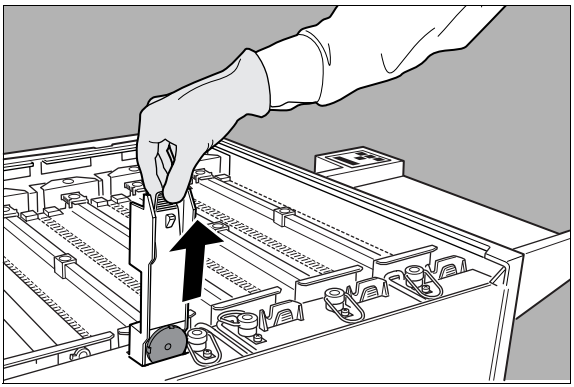
Clean the pumps

Clean the pumps every three months.

1 Remove the top cover.

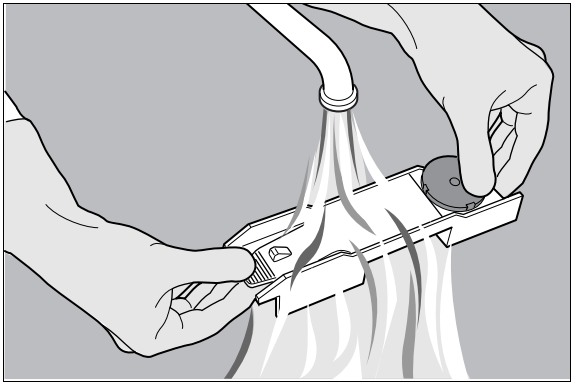


2 Press the pump housing release button and lift up the pump housing.

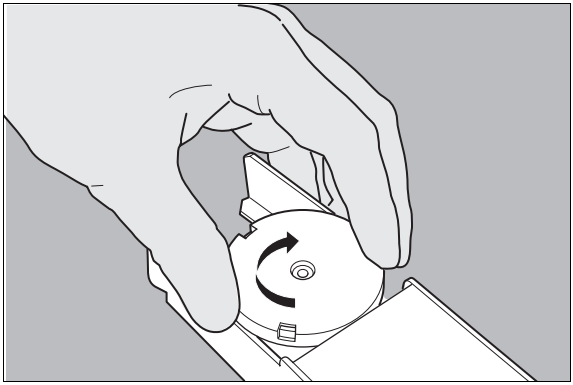


You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

3 Rinse the pump housing thoroughly under running water.



4 Loosen and remove the pump lid by turning clockwise.

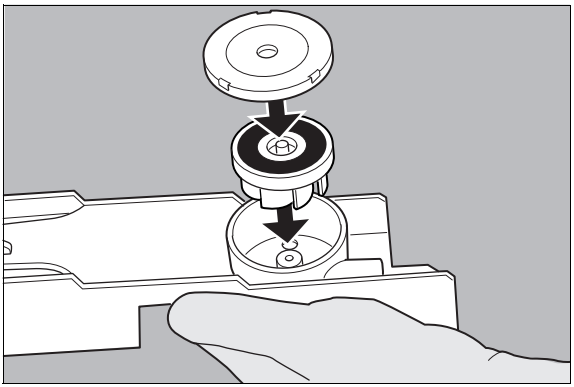


Inside, you find the pump magnet.

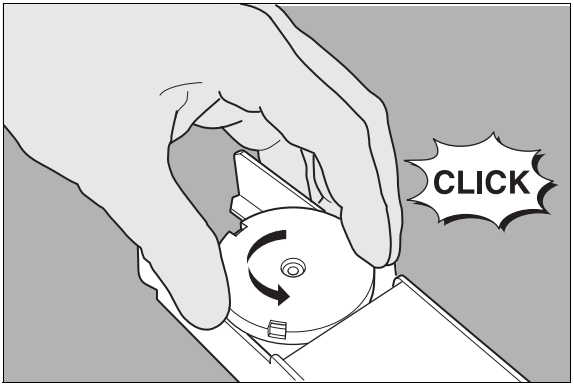
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

5 Clean all parts thoroughly under running water.

Make sure to reinstall the parts as shown in the picture below.



6 Replace the pump magnet and fasten the pump lid by turning counterclockwise.

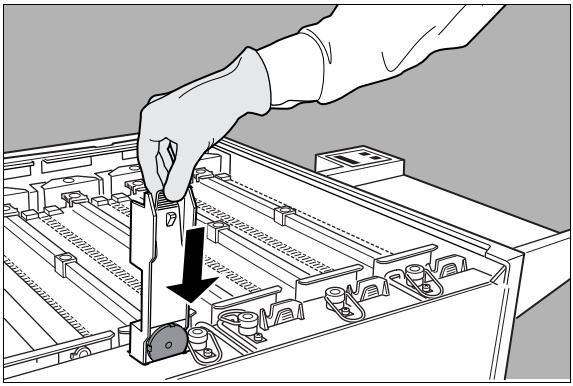


You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

7 Replace the pump housing in the processor.

Make sure to check the numbers which mark the pump housings and their corresponding locations.

Make sure to place every element back in the appropriate location. ***Refer to 'Overview and location of identification labels.' on page 53.***



If you can not slide the housing all the way in, you may be trying it the wrong way.

8 Reinstall the top cover.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

Chapter 6

Troubleshooting

This chapter provides solutions to some problems you may encounter while working with the Classic E.O.S.

- ❑ Troubleshooting checklist
- ❑ The processor is out of operation
- ❑ The developer or fixer level is too low
- ❑ The water level is too low
- ❑ Jammed film
- ❑ Film quality problems
- ❑ The developer temperature is too low
- ❑ The fixer temperature is too low
- ❑ Messages when accessories are connected

Troubleshooting checklist

Error status	Refer to	Page
You try to feed a film but it is not accepted.	The processor is out of operation.	*77*
Display messages ‘Developer level low’ or ‘Fixer level low’.	The developer or fixer level is too low.	*79*
Display messages ‘Water level low’.	The water level is too low.	*84*
An accepted film is not deposited in the exit tray.	Jammed film.	*85*
The processed film is still moist, or is deformed or shows drying patterns.	Film quality problems.	*87*
Display messages ‘Check water pump’.	Clean the water pump. If that does not help, contact your local service organization.	*68*
‘Error 502 - See manual’ message.	The developer temperature is too low.	*88*
‘Error 504 - See manual’ message.	The fixer temperature is too low.	*90*
‘Error 514 - See manual’ message.	Clean the pumps. (DEV, FIX1, FIX2) If that does not help, contact your local service organization.	*68*
‘Error 510 - See manual’ message.	Failure of the dryer heaters. Procedure for skilled service personnel only.	*101*
‘Error 501’, ‘Error 503’, ‘Error 510’, ‘Error 506’ and other ‘Error XXX’ messages.	Contact your local service organization.	
Messages when accessories are connected.		*92*

An interval beep accompanies the messages.

Emergency film processing

With most service messages, the processing of emergency films remains possible. It is recommended however to proceed with the troubleshooting actions as soon as possible.

Emergency film possible	Emergency film not possible
‘Error 501’	‘Error 506’
‘Error 502’	Film jam
‘Error 503’	Film not accepted
‘Error 504’	‘Developer level low’
‘Error 505’	‘Fixer level low’
‘Error 510’	‘Water level low’
‘Error 514’	‘Error 550’
‘Check water pump’	‘Error 562’
‘Error 518’	‘Error 563’
‘Error 519’	‘Error 580’
‘Error 520’	‘Error 582’
‘Error 535’	
‘Error 539’	
‘Error 549’	
‘Error 557’	
‘Error 558’	
‘Error 559’	
‘Error 560’	
‘Error 574’	
‘Error 575’	
‘Error 579’	

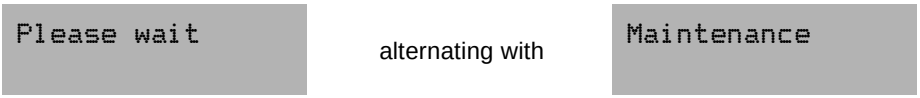
Emergency films do not always meet the quality standards of development, rinsing or fixing. In addition, the archivibility of films thus processed is not always guaranteed.

Refer to ‘Processing an emergency film’ on page 25.

Maintenance message

The Classic E.O.S. must be checked and serviced periodically by your local service organization (default period: every six months).

If the following maintenance message is displayed, you must call your local service organization.



❖ *The message will continue to appear at start of work when processing the first four films of the day, until service takes place.*

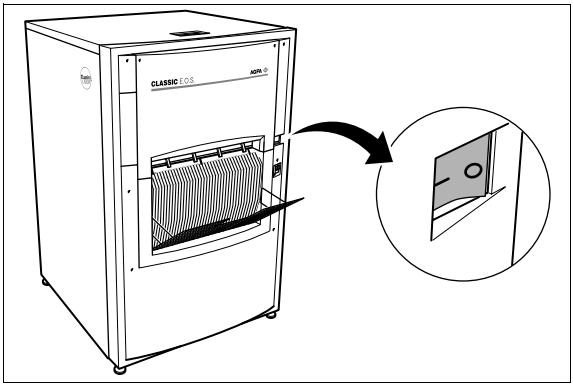
⚠ ***When not complying with the above-mentioned maintenance instructions, there might be a loss of photographic quality. If the processor is not maintained correctly, the proper functioning and the safe operation of the machine are no longer guaranteed.***

The processor is out of operation

1 Check that the processor is connected to the mains.

2 Check that the ON/OFF switch is in the 'I' position.

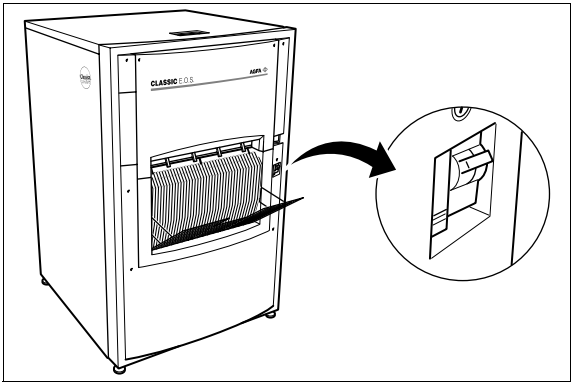
Do not touch the switch with wet fingers!



3 Make sure that the top cover is properly closed.

4 Check that the ground fault switch is not switched off.

Do not touch the switch with wet fingers!



The ground fault switch automatically switches off the processor when a loss of current is detected. If it is not possible to switch the processor back on with this switch, contact your local service organization.

The developer or fixer level is too low

The following message indicates that the level of the developer in the processor tank is too low:

Developer level low √	or, for the fixer,	Fixer level low √

You will have to check and possibly refill the respective tank with developer or fixer.

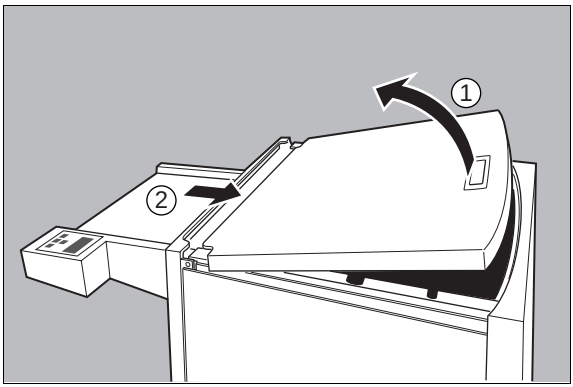
It is recommended to check, and, if necessary, refill fixer first and developer afterwards. You can thus avoid spilling fixer in a full developer tank, which would necessitate draining and cleaning the developer tank.

Possible causes are:

- The drain valve of the respective tank is not shut properly.
- A replenishment failure, e.g. the replenishment tanks could be empty.

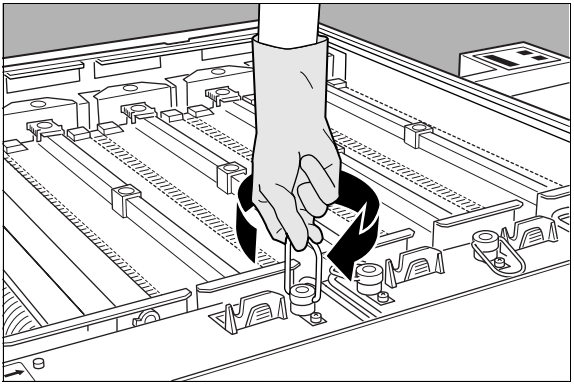
To check the developer or fixer level:

1 Remove the top cover.



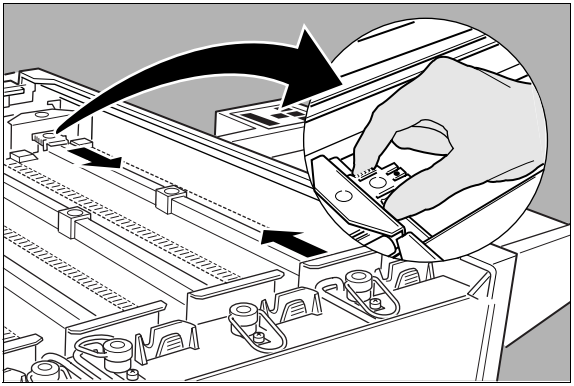
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

2 Check that the four drain valves are closed (turn clockwise).



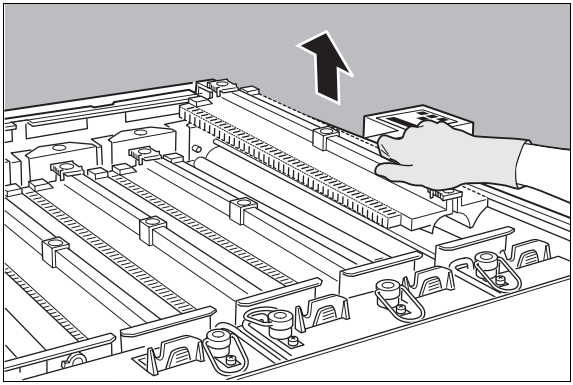
3 Unlock the covers of the developer tank, the two fixer tanks and the water tank.

Slide the two clips towards each other to release each cover, as shown below.



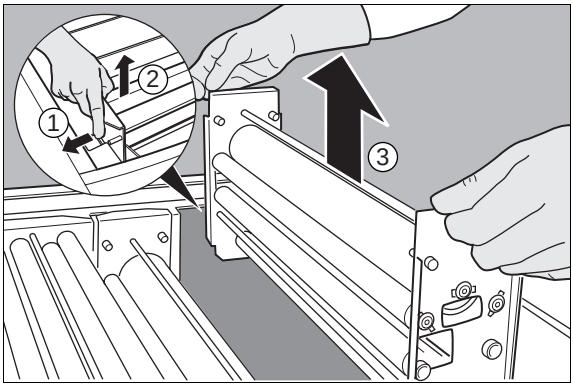
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

4 Remove the tank covers from the roller sets.



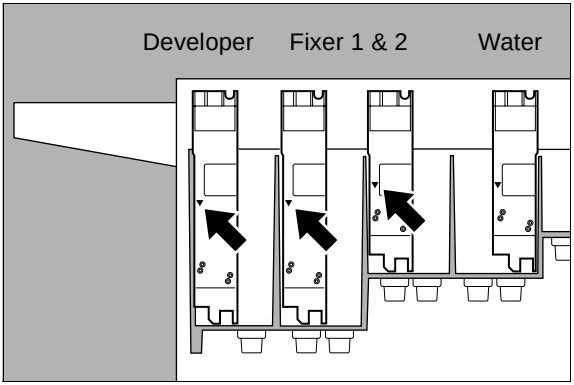
Observe safety and environmental regulations when working with chemicals. It is also advisable to wear the recommended protective clothing and goggles.

5 Release each roller set from its positioning clip [1] and carefully lift [2] the roller set out of its location [3].



You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

6 Check that the tanks still contain a sufficient amount of developer or fixer.



The developer or fixer level should be up to the marking in the tank.

7 If the level of developer or fixer is too low, fill the developer or fixer tank with ready-mixed developer or fixer, respectively.

Take care not to spill any fixer into the developer tank. Otherwise, clean the developer tank again and rinse it thoroughly.

8 Make sure to check the numbers which mark the roller sets, the tank covers and their corresponding tanks.

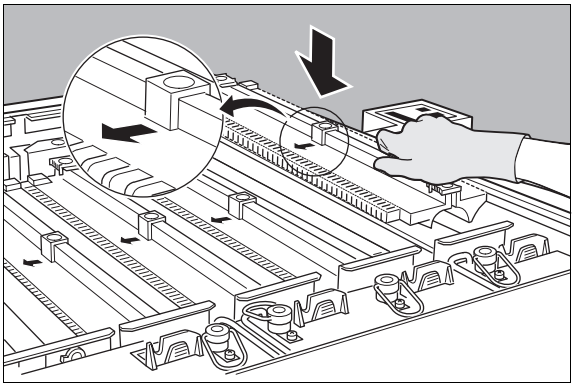
Make sure to place every element back in the appropriate location. ***Refer to 'Overview and location of identification labels.' on page 53.***

9 Place the roller sets back in the corresponding tanks (refer to the identification number labels).

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

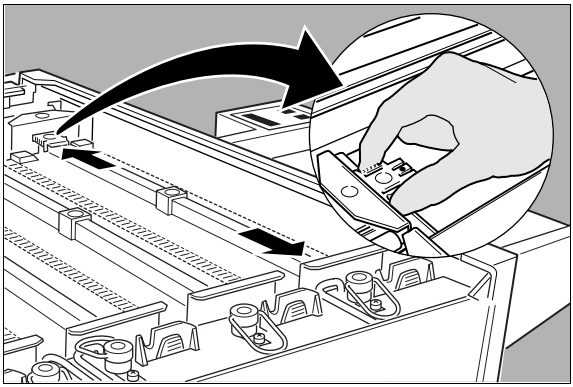
10 Place the tank covers back onto their corresponding roller sets.

Make sure the arrows on the tank covers point in the direction of the film exit tray.



11 Lock the tank covers.

Slide the two clips outwards as far as they will go (you must hear a click).



12 Reinstall the top cover.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

The water level is too low

The following message indicates that the level of the water in the processor tank is too low:

To check the water level:

1 **Check that the water tap is opened.**

2 **If the tap was open, clean or replace the water filter.**

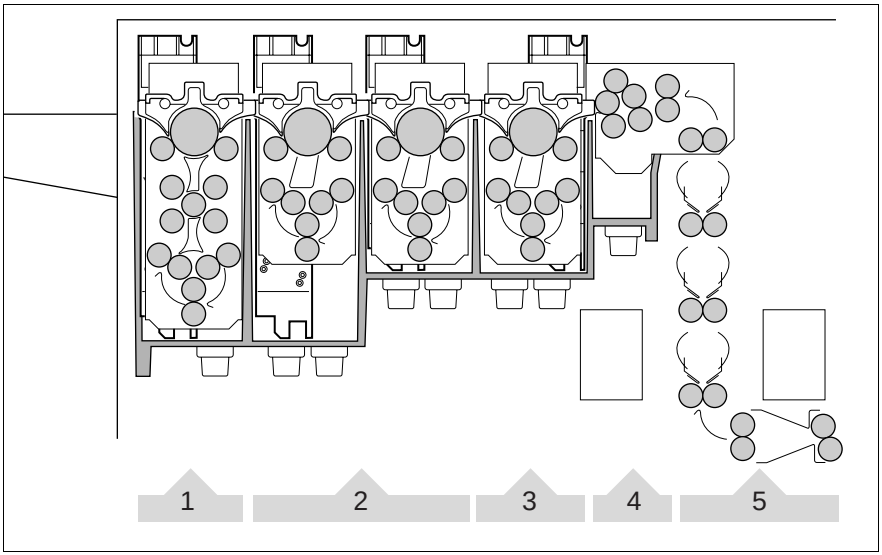
Refer to 'Cleaning the water filter' on page 104.

Jammed film

If the film you inserted for processing is not deposited in the film exit tray, it may be jammed in its transport path.

A film jam can occur:

- in the roller sets of the developer [1], fixer [2] or water tanks [3],
- in the squeegee roller section [4],
- in the dryer transport roller section [5].
  (Procedure for skilled service personnel only.)



If the film gets caught somewhere on its way through the processor, you have to check each section systematically, preferably starting with the squeegee roller section.

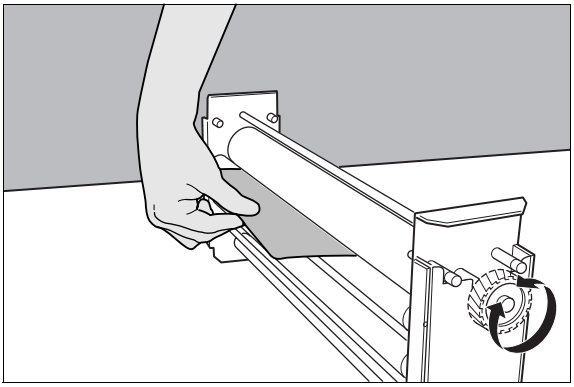
Disconnect the processor from the mains before starting to remove a jammed film.

Check for jams in the transport roller sets of the tanks

When a jam in this section occurs, it is highly recommended to perform the cleaning procedure for the appropriate roller set. The removal and reinstallation of a tank roller set is completely described in the corresponding cleaning procedure.

Refer to 'Clean the tanks and roller sets' on page 59.

During this procedure, if you find the jammed film, gently remove it from the roller set by turning the appropriate gear clockwise or counterclockwise.



Check for jams in the squeegee roller section

When a jam in this section occurs, it is highly recommended to perform the cleaning procedure for the squeegee roller set. The removal and reinstallation of the squeegee roller set is completely described in the corresponding cleaning procedure.

Refer to 'Clean the squeegee roller set' on page 66.

During this procedure, if you find the jammed film, gently remove it from the roller set by turning the appropriate gear clockwise or counterclockwise (see above).

Check for jams in the transport roller section

When a jam in this section occurs, the jam removal procedure can be executed by skilled service personnel only.

Refer to chapter 7, 'Instructions for skilled service personnel'.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

Film quality problems

The processed film is still moist

If a processed film in the exit tray is still moist, increase the dryer setting.

Refer to 'Dryer setting' on page 38.

The processed film is deformed or shows drying patterns

If a processed film in the exit tray is deformed or showing drying patterns, decrease the dryer setting.

Refer to 'Dryer setting' on page 38.

The developer temperature is too low

The following message indicates that the developer temperature is too low:

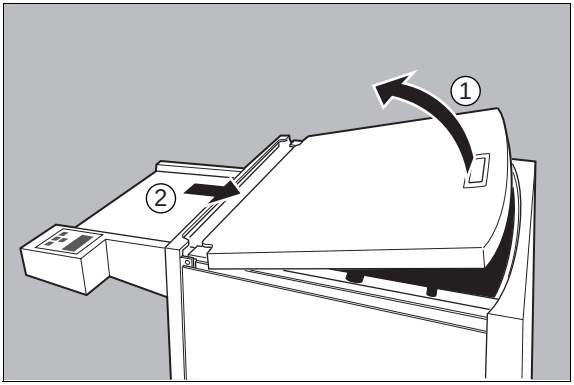
```
Error 502
See manual      √
```

The Classic E.O.S. has an integrated safety switch, that prevents the developer from overheating in case the level of developer should drop too low. If this should happen, you have to:

- Check the developer level and fill the tank if necessary. *Refer to 'The developer or fixer level is too low' on page 79.*
- Reset the developer safety switch, as described below.

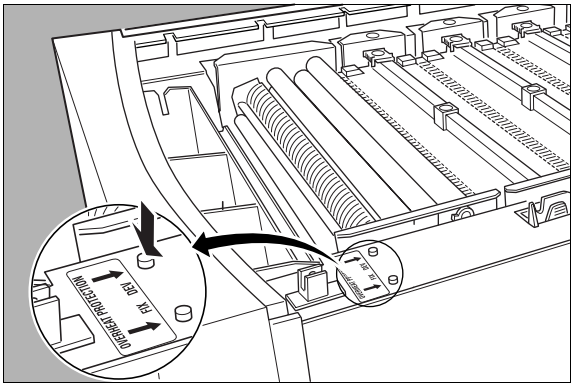
Disconnect the processor from the mains.

1 Remove the top cover.



You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

2 Depress the button indicating the developer safety switch.



3 Reinstall the top cover.

4 Reconnect the processor to the mains.

5 If resetting the safety switch does not resolve the problem or if the problem should reoccur, contact your local service organization.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

The fixer temperature is too low

The following message indicates that the fixer temperature is too low:

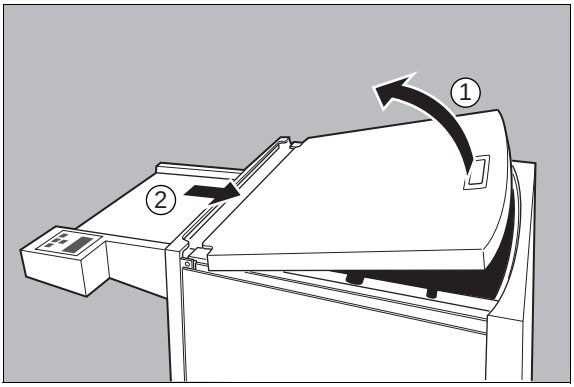
```
Error 504
See manual      √
```

The Classic E.O.S. has an integrated safety switch, that prevents the fixer from overheating in case the level of fixer should drop too low. If this should happen, you have to:

- Check the fixer level and fill the tank if necessary. *Refer to 'The developer or fixer level is too low' on page 79.*
- Reset the fixer safety switch, as described below.

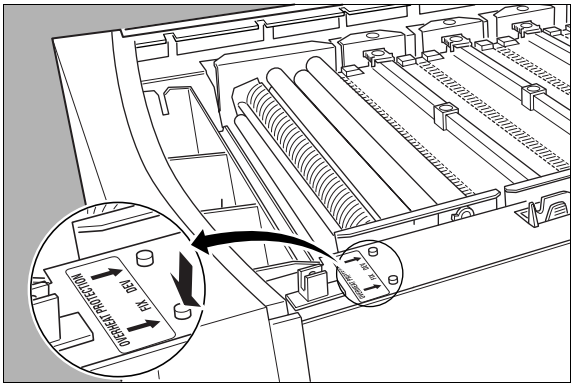
1 Disconnect the processor from the mains.

2 Remove the top cover.



You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

3 Depress the button indicating the fixer safety switch.



4 Reinstall the top cover.

5 Reconnect the processor to the mains.

6 If resetting the safety switch does not resolve the problem or if the problem should reoccur, contact your local service organization.

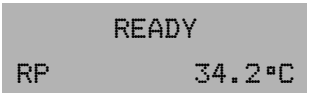
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

Messages when accessories are connected

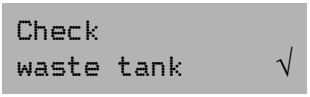
The messages mentioned below can appear if accessory devices are connected to the Classic E.O.S. with the corresponding sensor cables (contact your local service organization).

Waste tanks for fixer and developer

Messages when the waste tanks for fixer or developer are full:

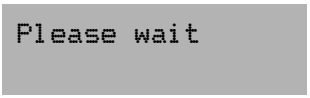


alternating with:



or,

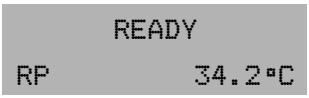
alternating with



Empty the respective waste tank.

Developer replenishment tank

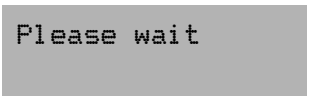
Messages when the developer replenishment tank is empty:



alternating with

or, during film feed,

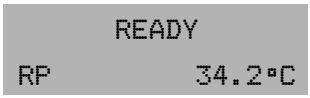
alternating with



Fill the developer replenishment tank.

Fixer replenishment tank

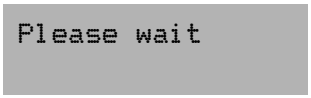
Messages when the fixer replenishment tank is empty:



alternating with

or, during film feed,

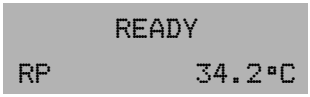
alternating with



Fill the fixer replenishment tank.

Chemix

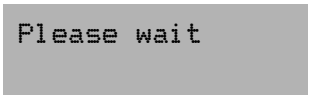
Message when the fixer or developer replenishment tank in the Chemix mixer is empty:



or, e.g.:

or, during film feed,

alternating with



Fill the Chemix mixer replenishment tank.

Anti-algae accessory

If the Algizid tank of an anti-algae agent dosing is empty, this message appears alternating on the display of the processor, accompanied by 3 short beep sequences (repeated every 5 minutes):

READY RP 34.2°C	alternating with	Check anti-algae √

or, during film feed,

Check anti-algae √	alternating with	Please wait

Fill the container with fresh anti-algae agent.

E.O.S. Fix

Message when there is an operating problem on the E.O.S. accessory:

READY RP 34.2°C	alternating with	Check EOS module √

or, during film feed,

Check EOS module √	alternating with	Please wait

Check the E.O.S accessory to solve the problem.

Chapter 7

Instructions for skilled service personnel

This chapter describes procedures only for skilled service personnel, trained on the machine by the Agfa Service Organization. Make sure to read the safety notices on the first page of this chapter.

- Important safety notice
- Clean the dryer roller sets
- Check for jams in the dryer section
- Failure of the dryer heaters
- Cleaning the water filter

Important safety notice

This chapter deals with repairs and preventive maintenance work for the Classic E.O.S. during which live electrical or hot components may become exposed.

Thus, the procedures described hereafter can imply hazardous situations and are therefore to be carried out by skilled service personnel only.

Make sure to disconnect the processor from the mains before performing any maintenance activities.

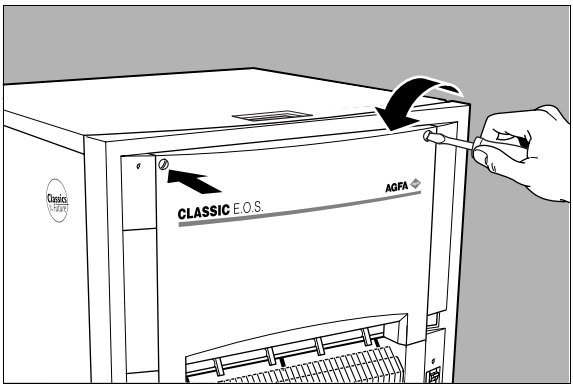
INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

Clean the dryer roller sets

Clean the dryer roller sets every three months.

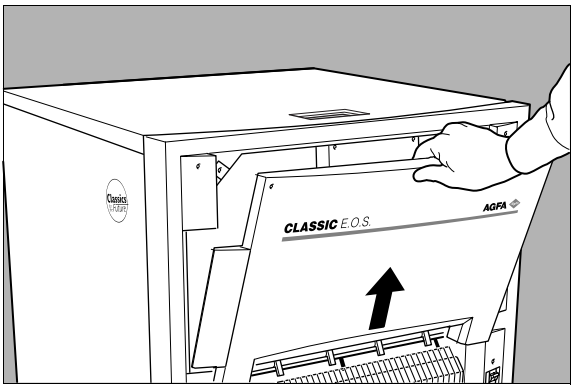
The inner parts of the dryer can be very hot when the processor has been in operation. Therefore, clean the dryer roller sets only at the beginning of a working day.

1 Loosen the two quarter turn fasteners securing the cover.



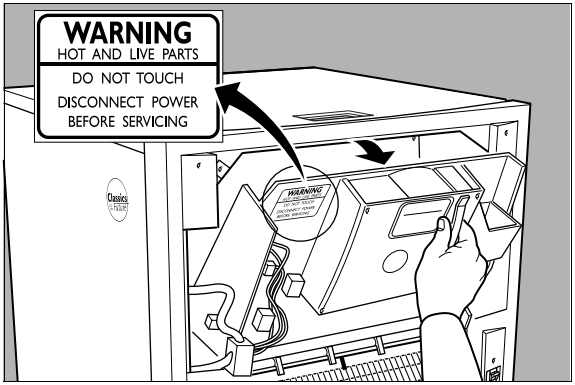
You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

2 Remove the cover.



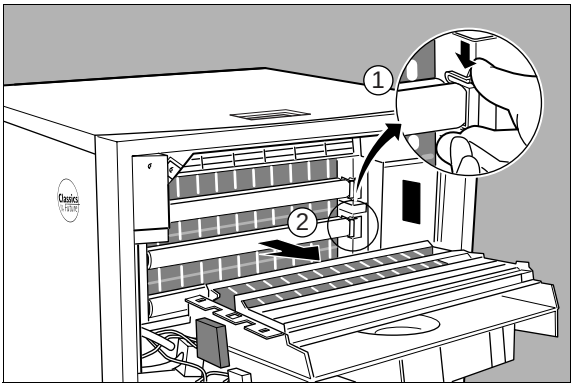
INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

3 Tilt the dryer block to its horizontal position.



Take care not to touch any inner parts of the infrared dryer since they can be extremely hot. The quartz lamps can be damaged when touched.

4 Remove the roller sets alternately, by pressing their release clips [1] and sliding them out of their location [2].

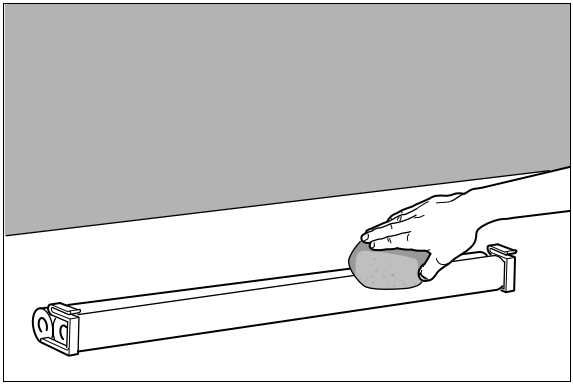


Remove, clean and replace the roller sets one by one, so that they remain at their original locations.

Make sure not to bend the film guide elements. Handle with care!

INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

5 Wipe the dryer roller sets clean using a moist sponge.



If necessary, use oil-free cleansing agents to remove deposits or residues.

Optimal image quality can only be guaranteed when handling the rollers with care.

6 Wipe the rollers dry using a lint-free cloth or sponge.

7 Replace the roller sets. They snap into place.

8 Close the tilted dryer section.

9 Replace the cover, securing the cover with the two quarter turn fasteners.

10 Reinstall the top cover.

INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

Check for jams in the dryer section

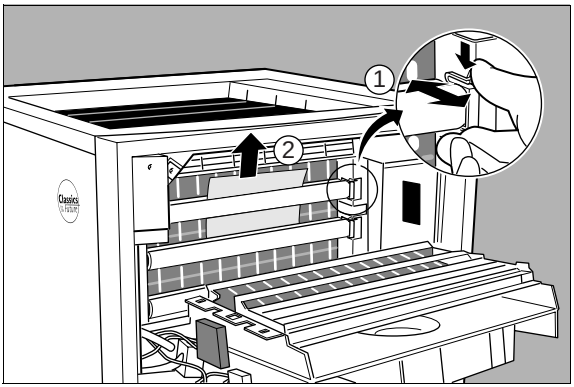
Disconnect the power cord from the mains before performing any maintenance activities.

When a jam in this section occurs, it is highly recommended to perform the cleaning procedure for the appropriate dryer roller set. The removal and reinstallation of a roller set is completely described in the corresponding cleaning procedure.

Refer to 'Clean the dryer roller sets' on page 97.

During this procedure, if you find the jammed film, gently remove it from the roller set.

You do not have to remove the roller set completely: with one hand press the release clip and push the rollers slightly apart [1], while you remove the jammed film with the other hand [2].



After performing the maintenance activities, introduce blank films (test films) to check the normal functioning of the machine.

INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

Failure of the dryer heaters

Disconnect the power cord from the mains before performing any maintenance activities.

Three overheat protection buttons have been provided to reset the heaters in the dryer when a failure has occurred.

The following message indicates that the overheat protection buttons must be pressed.

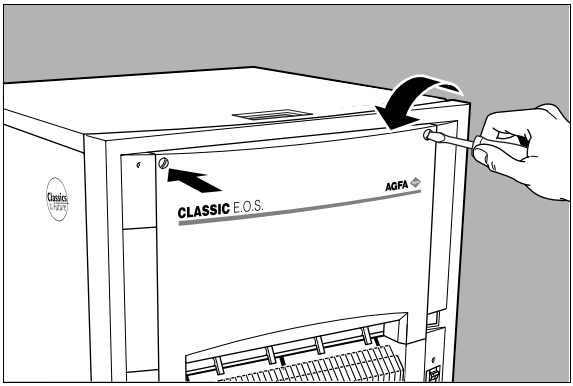
```
Error 505
See manual      √
```

Besides the message ‘Error 505’, the following error messages can also occur:

- Error 574,
- Error 575,
- Error 510.

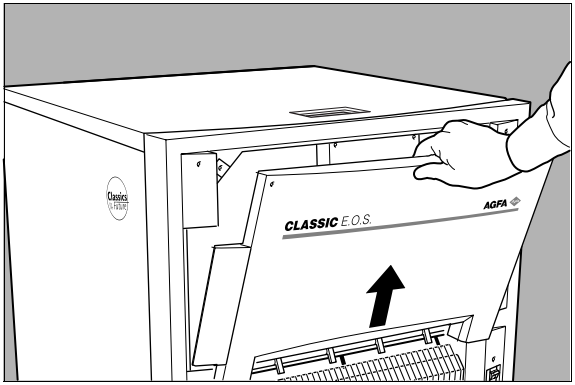
1 Disconnect the processor from the mains.

2 Loosen the two quarter turn fasteners securing the cover.

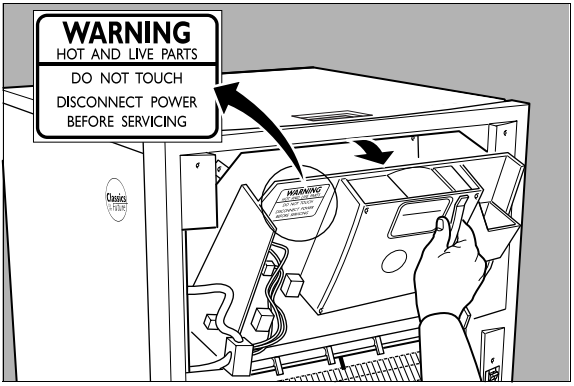


INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

3 Remove the cover.



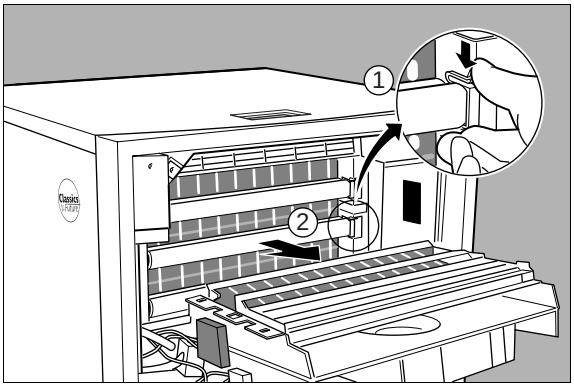
4 Tilt the dryer block to its horizontal position.



Take care not to touch any inner parts of the infrared dryer since they can be extremely hot. The quartz lamps can be damaged when touched.

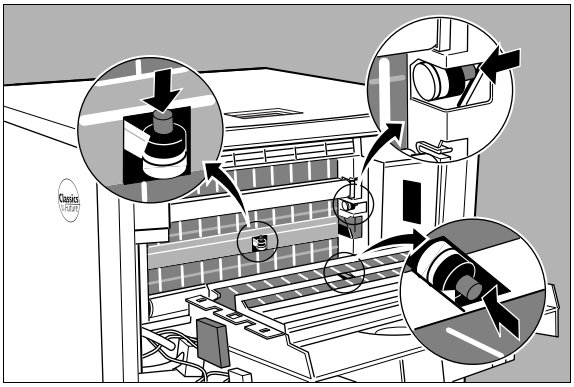
INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

5 Remove the roller set as indicated on the figure, by pressing the release clip [1] and sliding it out of its location [2].



WARNING
HOT AND LIVE PARTS
DO NOT TOUCH
DISCONNECT POWER
BEFORE SERVICING

6 Locate the three overheat protection buttons and depress them.



WARNING
HOT AND LIVE PARTS
DO NOT TOUCH
DISCONNECT POWER
BEFORE SERVICING

7 Replace the roller set.

8 Close the tilted dryer section.

9 Replace the cover, securing the cover with two quarter turn fasteners.

⚠ ***Contact your local service organization if the problem reoccurs.***

⚠ ***INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY***

Cleaning the water filter

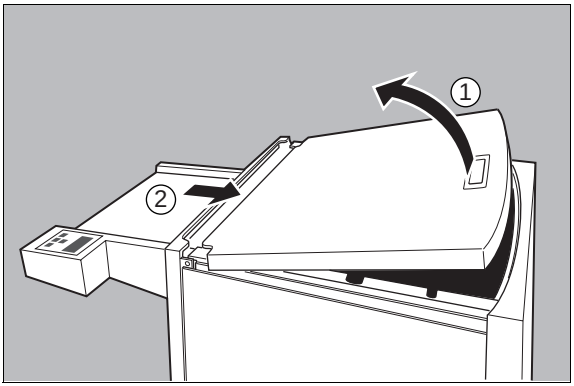
Disconnect the power cord from the mains before performing any maintenance activities.

You are reminded to handle all chemicals with care, to wear protective gloves and an apron to protect your clothing, and to wear protective glasses for your safety. Always conform to local regulations regarding the disposal of chemicals.

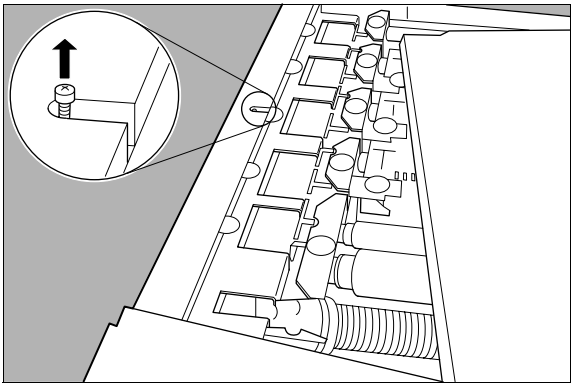
Clean the water filter every six months.

1 Close the water tap.

2 Remove the top cover.

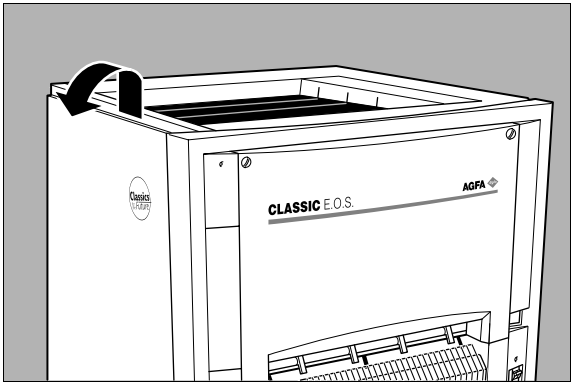


3 Loosen and remove the crosshead screw at the side.

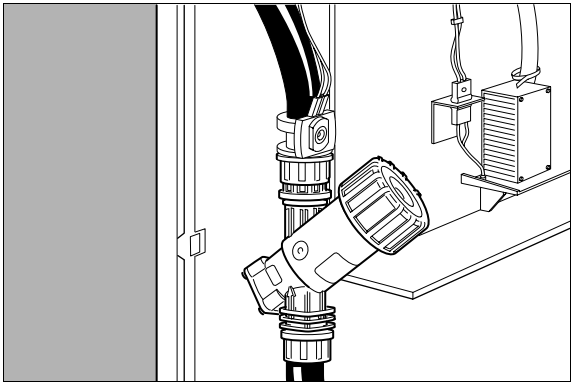


INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

4 Lift the side panel and remove it.



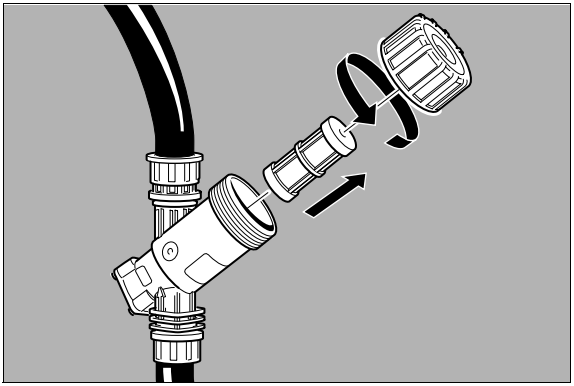
The water filter is located at the left.



INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

5 Loosen the screw cap and remove the filter from its housing.

Loosen the screw cap by hand only. Do not use any tools to remove the screw cap to prevent damage.



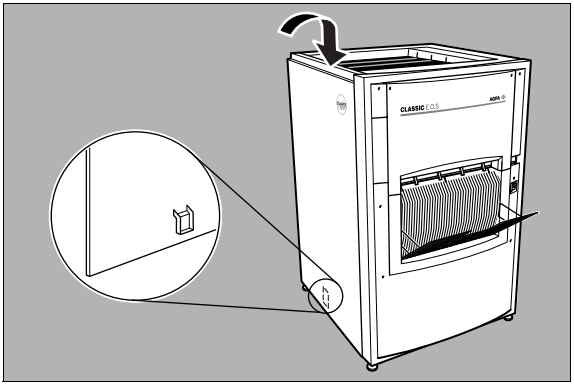
6 Clean the water filter under running water.

Be careful, do not damage the wire gauze.

7 Place the filter back into its housing.

8 Fasten the screw cap onto the filter housing.

9 Reinstall the side panel.



10 Fasten the crosshead screw and reinstall the top cover.

INSTRUCTIONS FOR SKILLED SERVICE PERSONNEL ONLY

Appendix A

Equipment information sheet

Specifications

Product description	
Type of product	Medical film processor
Commercial name	Classic E.O.S.
Model number	5270/xxx
Original seller/manufacturer	Agfa-Gevaert NV-Mortsel
Labelling	
CE	93/42 EEC ‘Medical Devices’ (Europe)
TÜV-Certification Mark	EN 60950
c-UL-us-Listing Mark	UL 1950, CSA 22.2 No. 950 (US/CAN)
Dimensions	
Length, feed table and receiving tray excluded	740 mm
Length, feed table and receiving tray included	1270 mm
Width	710 mm
Height	1130 mm
Weight	
Empty	ca 135 kg
With filled tanks	ca 165 kg
Materials	
Equipment does not contain:	CFC or HCFC, asbestos, PCB or PCT, mercury, cadmium, lead as additive to plastic
Plastic parts > 50 g	marked according to ISO 11469

Electrical connection	
Operating voltage	200 - 240 V
Mains fuse protection	15/16 A
Mains frequency	50/60 Hz
Power consumption	
Standby (room temperature ~ 20 °C)	0.25 kWh
During film processing	2.1 kWh (max. 3.45 kWh)
Environmental conditions	
Relative humidity	10 % - 80 %
Room temperature (without cooling system)	10 °C - 30 °C
Room temperature (with cooling system)	10 °C - 35 °C
Recommended consumables	
Developer	G 138 i
Fixer	G 334 i/G 338
Film	all Agfa medical X-ray films
Water	tap water
Tank volumes (with roller sets inserted)	
Developer tank	ca 8.8 l
Fixer tank 1	ca 10 l
Fixer tank 2	ca 5.8 l
Water tank	ca 5.8 l
Developer temperatures (default values upon installation)	
RP processing cycle	34 °C
IP processing cycle	37 °C
HT processing cycle	38 °C

Fixer temperatures	
Fixer tank 1	Not regulated
Fixer tank 2	34 °C in all processing cycles
Replenishment rates (default values upon installation)	
Developer	400 ml/m^2 at > 5 m^2 film/day
Fixer tank 2	400 ml/m^2 at > 5 m^2 film/day
Film characteristics	
Smallest film size	10 x 10 cm
Max. film width	435 mm
Roll film	Not possible
Water supply	
Compliant with DVGW	DIN 1988 Teil 4/1988 (Germany)
Water temperature	min. 5 °C; max. 5 °C under set developer temperature
Water pressure	2 - 6 bar
pH	6.5 - 8
Minimum conductivity	min.: 3 µS/cm
Water consumption	
During film processing	max. 3 l/min
Water consumption can be adjusted by your local service organization: between 3 l/m² and 30 l/m² (in steps of 1 l/m²)	
Standby	0 l/min

Physical emissions	
Noise emission (sound power level according to ISO 7779)	
• During film processing	max. 48 dB(A)
• Standby	max. 35 dB(A)
Radio frequency emission	according to CE requirement
Heat emission	
• During film processing	total: 7560 kJ/h; into the room: 3240 kJ/h
• Standby	total: 900 kJ/h; into the room: 900 kJ/h
Chemical emissions (equipment & consumables)	
Depending on processing conditions, and type of chemicals; in direct surroundings of equipment, when using recommended chemicals, and if installed according to instructions	
SO_2 (sulfur dioxide)	below TLV values
CH_3COOH (acetic acid)	below TLV values
Process data (throughput for 35x35 cm sized films)	
RP processing cycle	110 films/hour
IP processing cycle	150 films/hour
HT processing cycle	220 films/hour
End of Life	
Estimated product life (if regularly serviced and maintained according to AGFA instructions)	7 yrs.

Accessories

- Anti-algae kit.
- Water pressure reduction.
- Replenishment tanks 2 x 30 l.
- Replenishment tanks 2 x 80 l.
- E.O.S. Fix.
- Chemix.

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CE

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